

The following Motions and Documents were considered by the Board Finance and Property Committee during the Open Session of its May 31, 2022 meeting:

Agenda Title: **Proposed Dental Assisting Certificate, Faculty of Medicine and Dentistry**

APPROVED MOTION: THAT the Board Finance and Property Committee, on the recommendation of the GFC Academic Planning Committee, recommend that the Board of Governors approve the tuition for the Proposed Dental Assisting Certificate, as submitted by the Faculty of Medicine and Dentistry, to take effect in Fall 2023.

Final Recommended Item: 4b.

Agenda Title: **University of Alberta Innovation Fund**

APPROVED MOTION: THAT the Board Finance and Property Committee recommend that the Board of Governors:

- a. subject to the approval of the Minister under section 77 of the Post-secondary Learning Act and approval of the Lieutenant Governor in Council under section 80 of the Financial Administration Act:
 - i. authorize and approve the incorporation of a new corporation (FundCo), a wholly-owned subsidiary of the University of Alberta, including the governance model as is set forth in attachment 4 (Articles of Incorporation) and attachment 5 (By-Law No. 1);
 - ii. authorize the Chair of the Board of Governors or the Chair of the Board Finance and Property Committee, on behalf of the Board as sole shareholder of FundCo, to execute all documents necessary to give effect to the resolutions of the Board of Governors of the University of Alberta pertaining to the establishment of FundCo, and to carry out or have carried out the execution of the organizational documents of FundCo; and
- b. make an application to the Minister of Advanced Education for the required approval.

Final Recommended Item: 5.

Agenda Title: **Strategic Initiatives Fund Allocations**

APPROVED MOTION 1: THAT the Board Finance and Property Committee recommend that the Board of Governors approve an allocation of \$20 million from the Strategic Initiatives Fund for deferred maintenance initiatives.

APPROVED MOTION 2: THAT the Board Finance and Property Committee recommend that the Board of Governors approve an allocation of \$2 million from the Strategic Initiatives Fund to an internally restricted Universities Academic Pension Plan (UAPP) risk management reserve.

Final Recommended Item: 6.

Agenda Title: **Fall 2023 International Tuition Fee Proposal for Incoming Students**

APPROVED MOTION: THAT the Board Finance and Property Committee, on the recommendation of the General Faculties Council Academic Planning Committee, recommend that the Board of Governors approve tuition fees for new international students for all programs, as set forth in attachment 1, to take effect for the Fall 2023 intakes.

Final Recommended Item: 9.



**Governance Executive Summary
Action Item**

Agenda Title	Proposed Dental Assisting Certificate, Faculty of Medicine and Dentistry
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Motion

<p>THAT the Board Finance and Property Committee, on the recommendation of the GFC Academic Planning Committee, recommend that the Board of Governors approve the tuition for the Proposed Dental Assisting Certificate, as submitted by the Faculty of Medicine and Dentistry, to take effect in Fall 2023.</p>
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Item

Action Requested	<input type="checkbox"/> Approval <input checked="" type="checkbox"/> Recommendation
Proposed by	Dr. Brenda Hemmelgarn, Dean, Faculty of Medicine and Dentistry Dr. Paul Major, Chair, School of Dentistry, Faculty of Medicine and Dentistry
Presenter(s)	Dr. Steve Patterson, Associate Chair Academic, School of Dentistry, Faculty of Medicine and Dentistry

Details

Office of Administrative Responsibility	Provost and Vice-President (Academic)
The Purpose of the Proposal is	The proposal is before the committee to seek approval of the Dental Assisting Certificate tuition in the Faculty of Medicine and Dentistry.
Executive Summary <i>(outline the specific item – and remember your audience)</i>	<p>The School of Dentistry would like to implement a new Dental Assisting certificate. This proposal is for a model that will fulfill a clear need in the current labour market in Alberta for Dental Assistants, provide a Dental Assisting program with unique learning opportunities, and benefit the School of Dentistry current dental students and our delivery of patient care in our student clinics.</p> <p>The graduates of this certificate will have completed 5 sequential courses, over a 10-month timeframe for a total of 32 credits. The curriculum for this certificate will be delivered in a way that presents the material in a progression of sequential foundational knowledge and skills to work in a clinical environment. The curriculum will be aligned with the National Dental Assisting Examining Board as part of the initial program approval process and must be approved by the College of Dental Assistants of Alberta.</p> <p>Students who are admitted to the Dental Assisting Certificate program will be required to meet all of the program completion requirements in order to graduate including both workplace learning placements. The learning opportunities students will have access to at the School of Dentistry at the University of Alberta will be unique and like no other in Alberta.</p> <p>The Dental Assisting Certificate program will be funded through student tuition with no government funding or external funding.</p>
Supplementary Notes and context	<i>The Dental Assisting Certificate was approved at the May 18, 2022 GFC Academic Planning Committee (as recommended by the GFC Programs Committee and with delegated authority from GFC). BFPC is being asked to recommend on tuition only.</i>



Engagement and Routing (Include meeting dates)

<p>Consultation and Stakeholder Participation (parties who have seen the proposal and in what capacity)</p> <p><For information on the protocol see the Governance Resources section Student Participation Protocol></p>	<p><u><i>Those who are actively participating:</i></u></p> <ul style="list-style-type: none"> ● Senior Associate Dean, Dental Affairs and Chair, Department of Dentistry, Faculty of Medicine and Dentistry ● Associate Chair (Academic), School of Dentistry, Faculty of Medicine and Dentistry <p><u><i>Those who have been consulted:</i></u></p> <ul style="list-style-type: none"> ● Faculty Council, Faculty of Medicine and Dentistry (March 15, 2022) Motion carried: Faculty Council supports the creation of a new Dental Assisting Certificate ● University of Alberta, Program Support Team - February 24, 2022 for discussion ● Faculty of Medicine and Dentistry, Indigenous Health Initiatives Program, February 11, 2022 ● Office of the Registrar, Indigenous Recruitment - January 31, 2022 ● School of Dentistry Department Council - January 27, 2022 ● Faculty Learning Committee - FoMD - January 25, 2022 ● Alberta Dental Association & College - August 16, 2021 ● Provost and Vice-President (Academic) ● Faculty approval of the Calendar language for program regulations and courses - April 8, 2022 <p><u><i>Those who have been informed:</i></u></p> <ul style="list-style-type: none"> ● Psychometric Strategies and Research, Inc. - September 13, 2021 ● Commission on Dental Accreditation of Canada - August 30, 2021 ● National Dental Assisting Examination Board - August 20, 2021 ● Ministry of Advanced Education - August 9, 2021 ● University of Saskatchewan College of Dentistry - July 12, 2021 ● College of Alberta Dental Assistants - July 12, 2021, August 19, 2021
<p>Approval Route (Governance) (including meeting dates)</p>	<p>The following approval route has been planned at this time:</p> <ul style="list-style-type: none"> ● GFC Programs Committee - April 14, 2022 ● Registrar’s Advisory Committee on Program Budget and Fees -April 26, 2022 ● GFC Academic Planning Committee - May 18, 2022 (certificate and tuition) ● Board Finance and Property Committee - May 31, 2022 (tuition) ● Board of Governors - June 17, 2022 (tuition)

Strategic Alignment

<p>Alignment with <i>For the Public Good</i></p>	<p>Please note the Institutional Strategic Plan objective(s)/strategies the proposal supports.</p> <p>GOAL: Build a diverse, inclusive community of exceptional students, faculty and staff from Alberta, Canada, and the world.</p> <ul style="list-style-type: none"> ● OBJECTIVE 4: Develop, in consultation and collaboration with internal and external community stakeholders, a thoughtful, respectful, meaningful, and sustainable response to the report of the Truth and Reconciliation Commission of Canada.
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Item No. 4b

	<p>GOAL: Experience diverse and rewarding learning opportunities that inspire us, nurture our talents, expand our knowledge and skills, and enable our success.</p> <ul style="list-style-type: none"> ● OBJECTIVE: 7 Increase graduate and undergraduate students' access to and participation in a broad range of curricular experiential learning opportunities that are well-integrated with program goals and enrich their academic experience. <p>GOAL: Engage communities across our campuses, city and region, province, nation and the world to create reciprocal, mutually beneficial learning experiences, research projects, partnerships, and collaborations.</p> <ul style="list-style-type: none"> ● OBJECTIVE 16: Enhance, increase, and sustain reciprocal, mutually beneficial community relations, community engagement, and community-engaged research and scholarship that will extend the reach, effectiveness, benefit, and value of our university-community connections. <p>GOAL: Sustain our people, our work, and the environment by attracting and stewarding the resources we need to deliver excellence to the benefit of all Albertans.</p> <ul style="list-style-type: none"> ● OBJECTIVE 19: Prioritize and sustain student, faculty, and staff health, wellness, and safety by delivering proactive, relevant, responsive and accessible services and initiatives. 		
Alignment with Core Risk Area	<p>Please note below the specific institutional risk(s) this proposal is addressing.</p> <table border="0"> <tr> <td> <input type="checkbox"/> Enrolment Management <input type="checkbox"/> Faculty and Staff <input checked="" type="checkbox"/> Funding and Resource Management <input type="checkbox"/> IT Services, Software and Hardware <input type="checkbox"/> Leadership and Change <input type="checkbox"/> Physical Infrastructure </td> <td> <input type="checkbox"/> Relationship with Stakeholders <input type="checkbox"/> Reputation <input type="checkbox"/> Research Enterprise <input type="checkbox"/> Safety <input checked="" type="checkbox"/> Student Success </td> </tr> </table>	<input type="checkbox"/> Enrolment Management <input type="checkbox"/> Faculty and Staff <input checked="" type="checkbox"/> Funding and Resource Management <input type="checkbox"/> IT Services, Software and Hardware <input type="checkbox"/> Leadership and Change <input type="checkbox"/> Physical Infrastructure	<input type="checkbox"/> Relationship with Stakeholders <input type="checkbox"/> Reputation <input type="checkbox"/> Research Enterprise <input type="checkbox"/> Safety <input checked="" type="checkbox"/> Student Success
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Legislative Compliance and jurisdiction	<p><i>Post-Secondary Learning Act</i> GFC Programs Committee Terms of Reference GFC Academic Planning Committee Terms of Reference Board Finance and Property Committee Terms of Reference Section 2h</p>		

Separate Attachments and Appendices:

1. Ministry Proposal Template: Dental Assisting Certificate (page(s) 1 - 67)
 Appendices:
 Appendix A - Program Description
 Appendix B - Letter of Support - Dr. Depledge
 Appendix C - Letters of Endorsement/Support
 Appendix D - Avens Evaluation Group Ltd. - Labour Market Assessment
 Appendix E - DA Certificate Program Budget Model
 Appendix F - Library Impact Statement

Prepared by: Carla Clarke, cclarke1@ualberta.ca

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Proposal Template: New Certificate and Diploma Programs and Specializations and Non-Credential Programming

Complete this template for proposals for new certificate and diploma programs and non-credential programming or new specializations within existing programs.

Institutions should:

- ensure that submission content is concise. Any additional information may be appended;
- indicate “non applicable” when questions are not relevant to a particular proposal; and
- ensure that applicable supporting documents are attached to the proposal.

SECTION A: PROPOSAL OVERVIEW

Basic Information *(Complete the table below)*

Institution	University of Alberta
Program Name	Dental Assisting
Specialization Name	
Credential Awarded	Certificate
Proposed Effective Date	July 1, 2023

1. Type of Initiative *(Answer the following questions)*

This is a proposal for (select one from the drop-down menu):

New Certificate

2. Nomenclature *(Answer the following questions)*

a. What program and/or specialization name will appear on parchments and transcripts? (Should be the same as the program or specialization name identified above. If different, please provide a rationale.)

- Dental Assisting

b. Provide a brief rationale for the program and/or specialization name selected.

The Dental Assisting Program will deliver the knowledge and specific training requirements to be a part of an integrated healthcare team providing oral health care to patients. This Dental Assisting Program will provide students with unique clinical experiences allowing them to apply their knowledge and skills facilitating a 4-handed dentistry setting enhancing the productivity of our Dentistry students and increase the quality of care to our patients.

Reviewer’s comment:

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SECTION B: OVERVIEW OF PROPOSED PROGRAM OF STUDY

1. Program Description *(Answer the following questions)*

- a. Attach (as an appendix to this proposal) a concise program description document that includes:
- 3-4 sentence calendar description of the program;
 - a proposed program of study (including course names, descriptions, credits and prerequisites, by semester or year of study);
 - program location (i.e., campus locations and/or off-site locations), and delivery mode (i.e., face-to-face, online, or blended); and
 - program learning outcomes

See Appendix A

- b. Does the program align with characteristics (e.g., credits, learning outcomes, etc.) associated with this credential? (Consult with the Ministry as necessary).

Yes; No; or Not Applicable

- c. Please explain if response to (b) above is No or Not Applicable

Non Applicable

- d. Where applicable, identify any collaborations or potential collaborations with other post-secondary institutions or other organizations for this program.

The School of Dentistry has existing Memoranda of Understandings with the following organizations within the community:

- SHINE/Boyle McCauley Dental Clinic - volunteer opportunities
- University of Alberta Hospital Dental Clinic - possible rotation opportunities
- Glenrose Rehabilitation Hospital - possible rotation opportunities

The opportunities provided through these collaborations allow for students to give back to their communities as well as have authentic learning experiences.

Reviewer's comment:

2. Program Requirements *(Answer the following questions)*

a. List primary admission requirements for the proposed program.

- 65% in each of:
 - a. English Language Arts 30-1 or English Language Arts 30-2
 - b. Chemistry 30
 - c. Biology 30
 - d. One of the following: Math 30-1, Math 30-2, Pure Math 30 or Applied Math 30
 - e. English Language Proficiency
- Interview - A personal interview is required of all competitive applicants annually. Interview selection is based on academic record. Competitive applicants will be interviewed to determine if they have the personal qualities necessary for the profession. The interview evaluates an applicant's maturity, motivation, initiative, ability to communicate, personal qualities and interests

Additional Requirements and Considerations:

- Completion of University of Alberta's Indigenous Canada MOOC - ** students who can provide proof of completing Aboriginal Studies 30, via high school transcript, are considered to have satisfied this requirement*
- First Aid - Prior to Entering the Program - CPR-C (Basic Life Support - BLS) - students must provide evidence of current BLS certification for entry into the program and remain current throughout clinical training.
- Required Immunization Records
- Police Check - Criminal Record Check
- Computer Literacy and Requirements

Indigenous Applicants

The School of Dentistry is committed to the recruitment, retention and graduation of Indigenous students. All Indigenous applicants who meet the Indigenous application requirements and are successful in the admissions process will be admitted to the Dental Assisting Program.

- Applicants who are of Aboriginal ancestry within the meaning of The Constitution Act, 1982, §35(2), or
- A person who is accepted by one of the Aboriginal Peoples of Canada as a member of their community.

Proof of ancestry must be provided when applying as an Aboriginal student. Accepted forms of documentation are outlined in the [Admission of Aboriginal Applicants](#) section of the University of Alberta Calendar.

Candidates will be subject to standard minimum admission requirements as will be outlined in the calendar and approval by the Dentistry Admissions Committee.

b. List program completion requirements.

- Complete all of the required program courses with the minimum passing grade outlined in each course syllabus
- Successfully complete all assessments and mandatory clinical hours as per each course syllabus
- Complete the required Practicum hours and submit Practicum Log and Evaluation

Reviewer's comment:

3. Work Integrated Learning Placements (If applicable, answer the following questions)

a. Identify the number of placements required in the proposed program (including type of work setting and duration/timing of activities).

The Dental Assisting program will include an internal practicum rotation within the Oral Health Clinic and one external practicum.

- The Internal Practicum rotation will begin early on in the program and will continue sequentially building on foundational knowledge as students' skill set increases throughout the program. The Dental Assisting students will be integrated into assisting DDS students in the School of Dentistry Oral Health Clinic- time allocation will increase to approximately 6-9 hours per week as students progress in the program. Approx. 90 - 135 hours of Internal Clinical experience in various Undergraduate and Graduate clinics (subject to level of skill at the time)
- There will be one 2 week off-site practicum in a Private Dental Practice, or Community Practice for each student - minimum of 70 hours (7 hours a day)

b. Summarize communications with employers (append applicable letters of support, minutes of program advisory committee meetings, etc.) showing that sufficient placements will be available when needed.

At this time, we have been provided with support from various employers within the Dental Community committed and willing to host Dental Assisting students to meet their program practicum requirements when needed.

We have the support of one of Canada’s leading networks of dental practices, dentalcorp., having 62 practices in Alberta. Their willingness and commitment to host and support our students to meet their practicum requirements will assist in fulfilling practicum needs.

Dental Choice operates 20 dental clinics in Alberta and has offered their support in providing learning opportunities through hosting practicum sites for Dental Assisting students when needed. Dental Choice has employed a number of University of Alberta graduates on their team from both our Dentistry program and Dental Hygiene program.

We have the support of another dental corporation committed to hosting students within their existing 8 dental practices and are in the process of opening 4 more practice sites prior to our program start and will also offer these locations as host sites to our students.

The Dental Assisting program will work closely with the Dentistry program Course Coordinator for the 4th year Dentistry Electives course in seeking practicum host sites. They are currently recruiting registered dentists in Alberta to be a part of their program and are willing to share their roster of offices who may wish to host Dental Assisting students.

The FoMD Indigenous Health Initiatives Student Support and Services team are willing to work with our program to seek Indigenous practitioners willing to host students for practicum requirements.

See Appendices B and C - Included in Letters of Support

c. Comment on whether/how work integrated learning placements in other programs (at the institution and at other institutions within the Alberta Adult Learning System) may be impacted as a result of this program.

The DDS program and various graduate programs offered at the University of Alberta School of Dentistry will be impacted as they will have the Dental Assisting students integrated into their clinical sessions. This will allow the Dental Assisting students to have learning opportunities and clinical learning experiences while working with other students in a more authentic clinical setting. This type of experience will allow both Dental Assisting students and Dentistry students to learn how to work as a team and understand the roles, better preparing them for future practice. The DDS students and graduate students will have more clinical support with the Dental Assistant students working with them in their clinics providing a higher level of patient care.

Reviewer’s comment:

4. Endorsement of and/or Support for Program

a. Indicate endorsement(s) from relevant professional organizations, regulatory bodies, advisory committees, employers, and/or industry, when applicable.

Please see the following endorsement letters provided in the Appendices:

- Dr. Brenda Hemmelgarn - Faculty of Medicine and Dentistry - Dean
- Dr. Blaine Aucoin - University of Alberta - School of Dentistry

- Dr. Doris Lunardon - University of Alberta - School of Dentistry
- Ana Khehra - University of Alberta Dental Students' Association - President 2021/2022
- Dr. Doug Brothwell - Dean - College of Dentistry - University of Saskatchewan
- Dr. Randall Croutze - Alberta Dental Association & College (ADA&C)
- Dr. Hans Herchan - Dental Choice
- Dr. Terry Ortens
- Nicola Deall - Dentcorp
- Edmonton & District Dental Society

See Appendix C

Reviewer's comment:

SECTION C: LABOUR MARKET DEMAND AND ENROLMENT PLANNING

1. Demand for Program *(Answer the following questions)*

Appendix D - Avens Evaluation Group Ltd. Report - third party assessor of the labour market demand in Alberta for a new Dental Assisting program at the University of Alberta - see full report for reference to support components of section C: Labour Market Demand and Enrollment Planning

- a. Describe anticipated employment outcomes (including entrepreneurial and/or self-employment paths) for program graduates.

The anticipated employment outcomes for program graduates suggest dental assistants will be employed mostly in private dental practices. Generally, dental assistants are primarily performing chairside dental assisting duties however often have secondary roles within the private practice in sterilization and administration tasks.

There are other opportunities for dental assistants in community dental health agencies, hospital dental clinics, dental insurance companies, administrative assistants, dental treatment coordinators, sterilization assistants, sales and dental education.

- b. Provide evidence of labour market demand for graduates, detailing how such demand was forecasted and substantiated regionally and provincially. (Append supporting documentation, as appropriate.)

The labor market demand was forecasted and substantiated through the reviewing of available data on education, labour market trends and engaging key stakeholders to gain their perspectives on labour market demand for RDA's in Alberta. This involved the collection of data from multiple sources including interviews, surveys described in detail in the Labour Market Evaluation report.

Interviews were conducted with employers, professional associations, regulating bodies, and RDA's. Surveys were also fielded to Dentists/Employers and Registered Dental Assistants in different demographics of Alberta.

The results from Avens Evaluation Group report indicated there is a shortage of RDA's in Alberta and the key indicators from the report suggest the labour market demand for RDA's comes from:

- Increased number of retirements - there will be a greater number of RDA's exiting the field then in previous years due to demographic and labour trends
- data also show a significant number of RDA's leave their profession within 10-20 years practice - with many moving into administrative roles, sales or treatment coordinator roles
- Predominantly females (99%) and ages (18-30) - maternity leaves, some returning to only part-time and some not returning at all
- RDA registration numbers do not reflect full time positions being worked and include part time, and casual employment, mixed job descriptions, and those working outside the province - this is indicative that the registration numbers are inadequate to meet the demands of the current labour market of the "ideal ratio of 2:1" RDA to Dentist
- In Alberta in 2020 the labour market would require a minimum of 6,301 full time RDA's where we currently have 6,102, resulting in a deficit of 200 to accommodate the suggested ideal ratio from regulatory bodies. If the number of part time RDA's working is considered the deficit increases to 546-726 full time RDA's.
- based on the employers preferred ratios 2:1 and RDA's reported work hours there is a deficit in Alberta of 746-925 full time RDA's to fulfill the needs of the labour market
- impact of COVID-19 - remains to be seen- fear of contracting COVID-19 RDA's being hired for COVID response, reduced immigration due to travel restrictions
- survey result demonstrated a volume of employers seeking RDAs
- survey result also showed employers found it difficult to recruit RDA's- receiving few applications and not qualified applicants
- survey respondents reporting they are understaffed for RDA
- employers would like to have more than 1 dental assistant hired in their practice
- career changes creating job openings
- working conditions and expectations

Labour market modeling data predicts a shortage of RDA's in Alberta, but the extent of this shortage appears to be even greater than forecasted based on the data collected and reviewed in this assessment report provided.

c. In cases where labour market demand is not the primary driver for creating the program, comment on social and/or community benefits.

Non Applicable

d. Identify which stakeholder groups were consulted regarding demand/need for this program:

- | | |
|---|---|
| ✓ Student/learners | ✓ Employers and professional associations |
| ✓ Faculty | ✓ Other post-secondary institutions |
| ✓ Regulator and/or accreditation bodies | ✓ Other (please identify) New graduates, RDA's in LMA |

e. Briefly discuss the results of the identified consultations and attach supporting documentation (e.g., minutes of meetings, letters of support, etc.), when available.

Results from Consultations with various stakeholders: the results from various stakeholders were positive and supportive of the University of Alberta School of Dentistry offering a Dental Assisting Program. See the results and key factors in points below and letters provided in Appendix C from stakeholders.

Consultations with Faculty:

- provide creative ways to mirror private practice
- four handed dentistry is essential during aerosol producing procedures
- learners in both programs will work closely together in the profession, it makes sense to have them clinically train together
- positive impacts on patient care, in learning environment but also in future private practice settings
- improve workflow of dental appointments
- team approach to delivering dental care

Consultation with Dental Students Association (DSA):

- positive impact on DDS students, will enhance learning opportunities to work with a Dental Assistant student
- provide 4-handed dentistry
- assist with patient care
- would want to include in DSA, be part of the team

Consultation with University of Saskatchewan - Dentistry and Dental Assisting programs:

- positive impact on patient care
- improves the educational experiences for students
- increase in productivity and workflow
- prepares both learners for future private practice settings, understanding roles and expectations, better trained team
- meets the needs of the workforce
- impacts reduction of required staff

Alberta Dental Association and College (ADA&C):

- this program will increase learning opportunities and enhance patient care

- shared educational experiences between roles of students to create a foundation of the working relationship and understanding of each others roles in the profession
- enhance the team approach to patient care
- 4-handed dentistry opportunities
- uniqueness of the program to provide exposure for students to the various specialty programs offered at U of A
- support the fact that there is a labour market demand for more trained dental assistants in Alberta

Consultations with Regulatory bodies, employers and RDA's - see Appendix D -Labour Market Assessment Report for further information

Employer Perception of the Labour Market for RDA's in Alberta:

- challenges recruiting RDA's for years
- retaining RDA's is a challenge
- very few applications for job opportunities
- very few fully qualified applicants for job postings
- no-shows for interviews
- must offer incentives
- poaching RDA's from other clinics
- difficult to attract RDA's to rural areas
- understaffed clinics impacting patient care
- unable to fill leave positions
- some employers would like to have more then the reported rate of 1:2 and would like to have 3 RDAs to support their work
- Employers felt the existing labour market modeling data does not fully reflect the experiences of the employers
- Registration numbers do not reflect the need

Registered Dental Assistants survey results:

- not working their preferred position
- Preferred hours worked vary, many not working full time
- not wanting to work weekends
- those choosing to leave the profession due to retirement, family planning, changing careers
- wages and work environment were discussed

Edmonton & District Dental Society (EDDS):

- EDDS is in support of the U of Alberta Dental Assisting Certificate.
- the program at U of A will produce skilled Dental Assistants
- allow the dental students to graduate with more aligned skills for what is needed in private practice
- more collaborative work between dental students and dental assisting students
- improve patient care and workflow

Appendix C - Letters of Support					
<p>f. Provide evidence of student demand for the program. (e.g., survey results, waitlists, demand in similar programs at other institutions etc.).</p> <p>Based on accessible information, Dental assistant education programs in Alberta have maintained enrollment numbers above 95% prior to the COVID-19 pandemic even as existing programs expanded and new programs were approved.</p> <p>Private dental assistant education programs offered throughout Alberta are required to show both graduation and employment outcomes above 70% to remain in operation in Alberta. Private programs have increased and expanded since 2017, demonstrating they are viable in Alberta.</p> <p>Post-graduation employment data are not available for all dental assistant education programs as many are private institutions. Indicative of the employment outcomes for students, NAIT reported 100% graduate employment for its Dental Assisting Programs in 2017/18, 2018/19, and 2019/20 18.</p>					
<p>g. Comment on the overall sustainability of learner demand for this program over the longer term.</p> <p>Other Dental Assisting programs in Alberta have consistently had high numbers of applicants to their programs (a surplus each year). Given the current trends in the labour market assessment and being a highly reputable school it is predicted this program will be able to sustain itself over the long term.</p> <p>Alberta's Occupational Outlook 2019-2028 anticipated a shortage of only 64 RDAs in the province for 2022, however the research and consultations done for this proposal lead us to believe the estimated number could currently be as high as 925 full time RDAs. Given the expected employment trend for dental assistants will increasingly be less than full-time, the proposed available seats in dental assistant education will be insufficient to address the demand. The current available seats in dental assistant education will be insufficient to address the current need.</p>					
Reviewer's comment:					

2. Projected Student Enrolment *(Complete the table below as applicable).*
(NB: Proposals for non-credentials do not complete anticipated no. of graduates line or divide enrolments by year of study.)

Proposed Enrolment	1st Year of Implementation	2nd Year of Implementation	3rd Year of	4th Year of Implementation	Annual Ongoing

			Implementation		
Total Headcount	52	52	52	52	52
● 1 st Year of Study	52	52	52	52	52
● 2 nd Year of Study	NA	NA	NA	NA	NA
● 3 rd Year of Study	NA	NA	NA	NA	NA
Anticipated No. of Graduates	52	52	52	52	52
Reviewer's Comment:					

a. Indicate the percentage of international students in the enrolment projections and provide a brief rationale regarding how the percentage was established.

The Dental Assisting program will be designed for Domestic (Canadian) students as defined by the University of Alberta. International students will not be considered. However, residents of Canada, who meet the admissions requirements (even if they are internationally trained) will be welcome to apply as domestic students. This provides a bridge or a pathway to work in a dental field in Canada for those who do not meet the criteria for licensure in Canada with their current credentials and international oral health training.

Reviewer's comment:

SECTION D: QUALITY CONSIDERATIONS

1. Quality Assurance Considerations (If applicable, answer the following questions) (NB: non-credential programs complete (a) only.)

a. What strategies did your institution use to foster program quality for the proposed program (e.g., curriculum mapping, use of expert panels, industry panels, or advisory panels, etc.)?

- Curriculum mapping will be done through program requirements of the National Dental Assisting Examining Board (NDAEB) – required to have curriculum approved by third party Psychometric Strategies and Research (PSAR) prior to NDAEB approval
- Program Approval will be completed by Provincial Regulatory Body - College of Alberta Dental Assistants

b. Append a copy of independent academic expert review, when applicable.

-PSAR/NDAEB report will be included upon receipt

Attach once received

c. Append a copy of the institution's response to independent academic expert review, when applicable.

-Our response to the PSAR/NDAEB

Attach once received

d. Describe the institutional quality assurance process(es) that will be used to ensure the continuing high quality of the proposed program

The Dental Assisting program will work with Curriculum Quality Assurance Coordinator for the School of Dentistry (Jacqueline Green) on the assurance of learning processes, curriculum management system, servicing and supporting the faculty in learning and teaching quality assurance activities.

The proposed program will create a quality assurance program aligning with guidelines listed in the CDAC requirements for Dental Assisting Programs

- Institutional committees - faculty members be part of committees regarding decisions directly affecting the DA program (ongoing planning, evaluation and improvement of the quality of the program)
- develop a program outcome assessment process used to improve the program quality (ie., NDAEB exam results, program surveys)
- establish a program advisory committee - to provide information and advice to support both the program and Dental Assisting education
- curriculum management process /curriculum committee - input from faculty, students, administrators and practicum sites
- the use of student evaluations of course content and teaching effectiveness and their preparation to enter practice. Utilize the results of the NDAEB and other key performance indicators to assist in evaluating the program
- Health and safety quality assurance for the use of ionizing radiation (radiation protection officer), fire and safety procedures, infection control and medical emergency procedures.
- policies and protocols related to patient care, records,privacy of patient information

- patient treatment record audits
- patient feedback forms
- Focus groups- instructors and students - program feedback

Reviewer's comment:

SECTION E: FINANCIAL VIABILITY AND SUSTAINABILITY

1. Budget and Funding Sources *(Answer the following questions)*

- a. Describe how the institution plans to finance the program, including the sources of any funds beyond tuition and Alberta grant funding:
 - The program will be funded independently through fees to the students. There will be NO government funding.
- b. Discuss risk mitigation plans should full revenue(s) not be achieved or should costs exceed amounts budgeted.
 - this will be a 1 year program adjustments will be made accordingly if required

Appendix E - Budget Model

Reviewer's Comment:

2. Tuition and Student Cost Considerations *(Answer the following questions)*

a. Document tuition and fee projections for students (specify domestic student tuition fees, international student tuition fees, compulsory student fees, and other costs likely to be incurred by students (texts, equipment etc.). Provide rationale where appropriate such as comparisons with similar programs. (Consult with the Ministry as needed.):

Proposed Tuition, Fees, Equipment Rental and Books for U of Alberta Dental Assistant Program in total : \$22,450

Tuition: \$18,250

Non-Instructional Fees: \$1,000

Equipment Rental: \$2,800

Books:\$400

<p>There currently is no other University in Alberta offering this Program or one of similarity. For comparison purposes the University of Saskatchewan offers a Dental Assisting Certificate: Tuition \$14,934 Fees \$988 Books \$1500 - \$2500 (may vary) Approx. Total \$17,422-\$18,422</p> <p>In Alberta there are schools offering Dental Assisting programs varying in tuition and total costs ranging from: \$9,000 - \$19,000.</p>
<p>a. Does the proposed program align with the Tuition and Fees Regulation? <input checked="" type="checkbox"/> Yes; or <input type="checkbox"/> No</p> <p>Yes, upon approval</p>
<p>b. Please elaborate on the above answer, if necessary.</p>
<p>Reviewer's Comment:</p>

SECTION F: INSTITUTIONAL IMPACT

<p>1. Institutional Capacity <i>(Answer the following questions)</i></p>
<p>a. Briefly describe how the proposed program aligns with the institution's mandate and government priorities.</p> <p>The University of Alberta mandate emphasizes the availability of both on-site and distance learning options; integrated learning and research environments; intellectual and creative diversity; and industry-based partnerships that foster innovation. These are all influences that are at play within the School of Dentistry and that will enhance the experiences of Dental Assisting Program students.</p> <p>The Dental Assisting Certificate will be designed in a hybrid manner that optimizes learning potential and maximizes learning flexibility through the combination of distance and on-campus programming.</p> <p>The Dental Assisting Certificate will enhance pathways into the field of oral health through the School of Dentistry's programs, opening up learning options for individuals with less background education and with less time to invest in learning. It will complement the existing School of Dentistry Programming, introducing the final clinical member of the Dental Care Team into the School's practice environment, and enhancing the potential for integrated interprofessional and team-based learning across all programs.</p>

The School of Dentistry actively engages with and contributes to the field of oral health, the Dentistry and Dental Hygiene Professions, and the oral health of Albertans through research, education, and through the services of the School’s Oral Health Clinic. The Dental Assisting Program will be embedded within the School and students will gain experience within clinical practice settings alongside students within Specialized Graduate Programs, the Doctoral of Dental Surgery Program, and the Dental Hygiene Program. Students within the Dental Assisting Program will gain from these integrative clinical experiences by gaining an authentic sense of the interprofessional nature of oral health care, developing a stronger sense of the diversity within the field, and reinforcing the significance of their role within the oral health team.

Additionally, Dental Assisting students will be learning within simulation laboratories and clinical environments where treatment practices, methods, materials, and equipment available for practice are all determined through evidence-based approaches and with a focus on alignment with current innovations and professional trends within the field.

Finally, the School’s Oral Health Clinic, combined with a planned Experiential Practicum, will expose Dental Assisting students to oral health needs as they exist across diverse patient communities.

Currently the School provides opportunities for NAIT dental assisting students to participate in a practicum at the Oral Health Clinic during the winter term of the academic year. The establishment of a Dental Assisting Certificate Program at the School of Dentistry will not impact upon that existing collaboration with NAIT and it is anticipated that the NAIT practicum will continue.

b. To what extent does the program build on the institution’s existing programs, infrastructure, resources and experience from offering programs in related fields?

The Dental Assisting Certificate Program will help to optimize the influence of the School of Dentistry’s commitment to evidence-based practice and widen the scope of the School of Dentistry’s contributions to the field of oral health care and the Professions of Dentistry and Dental Hygiene in Alberta.

Appendix F - Library Impact Statement

Reviewer’s Comment:

2. Internal Review and Approval

a. Indicate which internal governance body recommended approval and specify date of approval.

Programs Committee - April 14, 2022

APC - May 4, 2022 - for recommendation on the tuition and approval of the certificate

BFPC - May 31, 2022 - for recommendation of the tuition
 Board - June 17, 2022 - for approval of the tuition

Reviewer's Comment:

SECTION G: SYSTEM IMPACT

1. Program Duplication (*Answer the following questions*)

a. Does the proposed program potentially duplicate existing programming in the Alberta Adult Learning System?

Yes; or No

b. If yes, list these programs (including those offered by Private Career Colleges).

Accredited Programs are:

- CDI College
- Columbia College
- KDM
- NAIT
- SAIT

Provisionally Approved programs:

- Reeves College
- Risio institute for Digital Dental Assisting

c. If a proposed program potentially constitutes program duplication, explain why such duplication is appropriate and beneficial in this circumstance.

The University of Alberta Dental Assisting program will offer unique experiences and opportunities for Dental Assisting students to work alongside students/residents and staff in the Undergraduate Doctor of Dental Surgery program (DDS), Oral Medicine Graduate Program, Periodontology Graduate Program, Orthodontic Graduate Program and the General Practice Residency Program together increasing the quality of patient care and having opportunity for more authentic learning experiences.

The labour market demands offer evidence to support the need for more Dental Assistants in Alberta. The existing facilities, diverse learning opportunities and expertise of faculty and staff we have at the University of Alberta will offer an educational experience like no other program in Alberta, it will be beneficial to patients, employers, and the School of Dentistry as outlined in this proposal.

Reviewer's Comment:

2. Learner Pathways *(Answer the following questions)*

- a. Which programs or learning activities in the Alberta adult learning system ladder/transfer into this proposed program?

Applicants for this program will be able to apply directly from high school meeting the admission requirements, without other program prerequisites. Additionally, applicants can apply as mature students, or from other learning programs, with the appropriate high school admission requirements.

- b. Into which programs in the Alberta adult learning system does this proposed program ladder or transfer?

Graduates of this program could potentially lead to pursuing opportunities in office administration, office management diploma, health administration and other health or dental related programs

Reviewer's Comment:

SECTION H: OTHER CONSIDERATIONS

Other considerations

- a. Are there other factors or considerations the Ministry should take into account when reviewing this proposal?

The University of Alberta School of Dentistry continues to demonstrate how the services offered increase accessibility and care to those in our community. The addition of the Dental Assisting program will further enrich our existing programs and in return provide optimal treatment and care to our patients in our Oral Health Clinic.

Reviewer's Comment:

RECOMMENDATION (FOR DEPARTMENT USE)

Recommendation(s):

Rationale for Recommendation:
Reviewer(s):
Date Completed:

Proposed Dental Assisting Program Description

The proposed Dental Assisting Program will be a full time 10-month program starting in August 2023. The program will be delivered using a hybrid model of onsite and online classes. The onsite classes will be located at the U of Alberta North Campus including the Simulation Lab in the Edmonton Clinic Health Academy, and the Oral Health Clinic (OHC) in the Kaye Edmonton Clinic. The program will consist of 5 sequential courses including: didactic (both asynchronous and synchronous delivery), simulation labs, pre-clinical labs, clinical sessions, clinical rotation in the OHC and an external practicum. Dental Assisting students will have assisting opportunities within the Undergraduate Dentistry Program, General Practice Residency program, Periodontology, Orthodontics, Oral Medicine Graduate Clinics and Implant Clinics. Clinical rotations will be planned and assigned throughout the program.

Proposed Program of Study

Course 1: Foundations of Dental Assisting

Description: Foundations of Dental Assisting is the first course in a sequential structure of learning that introduces students to the dental profession and their role as a Dental Assistant. Foundational knowledge and skills will be developed in behavioral sciences, biomedical sciences, oral health sciences and dental assisting theory and practice streams. Students will be able to integrate learning from all four streams and understand the relevance of foundational learning to dental assisting. Students will be introduced to the Simulation Lab, Oral Health Clinic and have opportunities to apply their knowledge in both settings.

Interrelated topics to be covered in this course will include:

Behavioral Sciences: Roles of the dental team, Provincial legislation, Regulatory bodies, and Professionalism, Scope of practice

Biomedical Sciences: Infection Prevention Control, WHMIS, Microbiology, Medical Emergencies, Anatomy and Body systems

Oral Health Sciences: Head, Neck and Oral Anatomy, Tooth morphology and Embryology

Dental Assisting Theory and Practice: Infection Prevention Control, Dental operator, Equipment and ergonomics, Dental lab

Units: 5 (6 weeks)

Prerequisite(s): program entrance requirements

Course 2: Patient Assessment I

Description: Patient Assessment I is the second course in a sequential structure of learning. This course educates students on patient assessments, findings and related procedures. Students will be able to integrate learning from all four streams of foundational learning to dental assisting. Students will be able to apply their knowledge in various lab and pre-clinical settings to build on their foundational learning.

Interrelated topics to be covered in this course will include:

Behavioral Sciences: Communication with patients, Patient records and confidentiality, Data gathering, Compromised patients

Biomedical Sciences: Microbiology, Pharmacology and Dental materials

Oral Health Sciences: Radiography, Oral biology, Dental diseases and prevention, Oral pathology, Oral Anatomy

Dental Assisting Theory and Practice: AxiUm training-records and charting, Preventive skills, Dental armamentarium, Dental instruments, Operative procedures, Dental lab skills, Chairside assisting skills

Units: 7 (9 weeks)

Prerequisite(s): Course 1

Course 3: Patient Assessment II

Description: Patient Assessment II is the third course in the sequential structure of learning. This course continues to build on the foundational knowledge of course 2 with the emphasis on patient care and clinical procedures. Students will be able to integrate learning from all four streams and apply foundational concepts to dental assisting. Students will be able to apply their knowledge in a combination of lab, pre-clinical and clinical settings to build on their foundational learning.

Interrelated topics to be covered in this course will include:

Behavioral Sciences: Patient interactions and communication, communication with dental team members

Biomedical Sciences: Dental Materials, Nutrition and oral health

Oral Health Sciences: Radiography, Dental Specialties, Pain Management

Dental Assisting Theory and Practice: Dental lab skills, Operative procedures, Chairside assisting skills, Preventive skills, properties and manipulation of commonly used dental materials

Units: 7 (10 weeks)

Prerequisite(s): Course 2

Course 4: Clinical Practice I

Description: Clinical Practice I is the fourth course in the sequential courses of the Dental Assisting Program, the emphasis of this course is for the students to continue to build on integrating all four streams and have a greater understanding of the relevance of foundational learning through the ability to assess, plan, implement and evaluate dental assisting procedures and patient care procedures. Students will continue to apply foundational knowledge through actively participating in assisting within the Oral Health clinic with fellow students and patients and perform their skills on peers in a clinical setting.

Interrelated topics to be covered in this course will include:

Behavioral Sciences: Communication skills, documentation, assessment skills

Biomedical Sciences: Advances in technology and procedures related to oral health

Oral Health Sciences: Radiography, Dental Specialties

Dental Assisting Theory and Practice: Skills performed on student partners, Dental records, Data gathering, Intraoral skills, Administrative Procedures

Units: 7 (10 weeks)

Prerequisite(s): Course 3

Course 5: Clinical Practice II

Description: This is the final course in the sequential courses of the Dental Assisting Program, the emphasis of this course is for students to apply behavioral, biomedical, oral health sciences and dental assisting theory and practice into clinical practice. Students will apply their knowledge in office administration, assisting with patients in the Oral Health Clinic, treating patients in the Dental Assisting Patient Care Clinic and participating in an external practicum in a private dental practice.

All Streams Integrated into practice: Behavioral, Biomedical, Oral Health Sciences and Dental Assisting Theory and Practice

Units: 6 (8 weeks)

Prerequisite(s): Course 4

Dental Assisting Program Learning Outcomes

Explain the Regulations and Standards of Care for Dental Assistants

- Define the Alberta regulatory body for Dental Assistants
- Describe the Health Professions Act
- Describe the code of ethics
- Discuss policies
- Discuss the importance of continuing competence including the professional development through continuing education

Demonstrate Occupational Safety skills

- Apply current infection prevention and control protocols, including aseptic techniques and hazards management.
- Demonstrate current disinfection and sterilization of equipment and instruments
- Identify medical emergencies, assist with the management of dental and medical emergencies

Demonstrate general dental assisting chair-side skills and applicable intra oral skills

- Demonstrate correct tray/instrument set up for different procedures
- Identify the difference between preventive, restorative and esthetic procedures
- Perform chairside dental assisting procedures including, but not limited to, general dentistry, specialized procedures, and intra oral skills as per entry practice for dental assistants in Alberta
- Assist during pre-treatment, treatment, and post-treatment procedures
- Perform intra oral skills as per entry practice

Demonstrate radiographic competencies

- Explain radiographic safety techniques
- Explain the principle of ALARA
- Demonstrate correct instrument assembly
- Demonstrate proper receptor placement, equipment use for intra- and extra-oral images including expose, process, and mount radiographs of diagnostic quality

Demonstrate skills in patient data gathering and record keeping

- Comprehend dental terminology, record patient medical and dental history, and chart pertinent patient information as required
- Collect systematically and document accurately diagnostic and clinical data into patient chart as required

Demonstrate skills in patient management and education

- Provide oral health instruction to dental patients and community groups
- Provide comprehensive dental assisting care to individuals from diverse socioeconomic, educational, cultural/ethnic backgrounds and age groups.
- Provide oral health instruction and counseling, including recommended home-care strategies

- Recognize patient abilities to properly care for their teeth
- Advise patients on the impact of diet on oral health and other behaviours (e.g. Tobacco use)
- Identify normal and pathological abnormalities of the oral structures

Demonstrate Administrative Office skills

- Practice effective interpersonal and communication skills
- Model professional conduct and appearance, and demonstrate professional behaviors consistent to the dental workplace
- Identify and effectively manage time and resources
- Communicate effectively with the public and dental health team members
- Schedule patients for various treatments, maintain a recall system, order and maintain supplies, complete patient insurance forms, make financial arrangements, billing, and utilize basic dental software

Demonstrate Dental Laboratory skills

- Demonstrate understanding of dental materials, properties and uses
- Prepare and manipulate chairside and dental laboratory materials
- Fabricate dental models, trays and appliances.
- complete laboratory procedures, including pouring and trimming molds and study casts.



January 23, 2022

Re: Support for the School of Dentistry - Dental Assisting Program:

To whom it may concern:

My name is Dr. Suzanne Depledge and I am the course director for our Elective course for our fourth year DDS program. I am writing in support of the newly proposed RDA program at the University of Alberta.

The Elective course will begin for our fourth year students in the Fall 2022/Winter 2023 year. Many of the electives will send our students out to private practice for a week for private practice mentorship and private practice management experience. We are currently recruiting our registered dentists in Alberta to join our program.

As our program and student enrollment grows, we will be working with the ADA&C in partnership to ensure we provide our students a match with ethical dentists in our community who are committed to educating our dental students. In Fall 2023 each of our 52 DDS students will participate in a one week private practice elective.

As we begin to form relationships with private practitioners who enjoy mentoring our students, we can offer a good roster of dentists who may want to also mentor the RDA students. One benefit of having the students in a private practice is for our practitioners to see the excellent clinical skill level and patient management skills our DDS and RDA students have. This is very beneficial to both potential employees and our new graduates.

I am happy to work with Ms. Carla Clarke and support the Dental Assisting program to find suitable practice placements for the incoming students. Please let me know if you have any other questions.

Sincerely,

Suzanne Depledge

Dr. Suzanne Depledge
Comprehensive Care Director
University of Alberta, School of Dentistry

February 9, 2022

Office of the Department Chair, School of Dentistry
5-478, Edmonton Clinic Health Academy
University of Alberta
11405-87 Avenue, NW
Edmonton, AB T6G 1C9

Dear Dr. Major,

On behalf of the Faculty of Medicine and Dentistry please accept this letter of support for the proposed Dental Assisting Certificate program within the School of Dentistry. The Dental Assisting proposal clearly demonstrates the rationale, impact, demand and support required to implement this program at the University of Alberta.

The University of Saskatchewan has demonstrated how beneficial having a collaborative Doctor of Dental Medicine program and Dental Assisting program is for their students and patient care. This collaborative model is representative of the type of programming the School of Dentistry would like to implement within the Faculty of Medicine and Dentistry. The goal of this model is to improve educational experiences, allow for a more authentic team approach enhancing patient care and provide a common understanding of the roles and responsibilities of each profession. This type of program will be unique to the School of Dentistry and to all of Alberta.

The addition of the Dental Assisting program will complement the existing School of Dentistry programming. Introducing the Dental Assistant into the school's practice environment will facilitate 4-handed dentistry opportunities providing new clinical learning experiences reflective of private practice. This type of integrated learning will enhance the potential for interprofessional and team-based learning across all programs. Creating this type of learning environment will allow students to excel in their independent role and also learn how to work together to provide optimal care for their patient's.

The Labour Market Assessment conducted by Avens Evaluation Group Ltd. in October 2021 clearly identifies the demand for more qualified dental assistants in Alberta. The information substantiated through educational data, labour market trends, and the perspectives of key stakeholders verifies the need and support for this type program at the University of Alberta. The

labour market trends are indicative of the need of more graduates of dental assistants, the School of Dentistry offers incredible facilities, access to various graduate programs, faculty, and staff to support this type of program that will aid in offsetting this shortage in Alberta.

The School of Dentistry engages with and contributes to the field of oral health, the professions of Dentistry and Dental Hygiene, oral health through education and research, and through the services provided at the School's Oral Health Clinic. The Dental Assisting program will be established within the School and students will gain experience within clinical practice settings alongside students within Specialized Graduate Programs, the Doctoral of Dental Surgery Program, and the Dental Hygiene Program.

The Dental Assisting Certificate Program will help to optimize the influence of the School of Dentistry's commitment to evidence-based practice and widen the scope of the School of Dentistry's contributions to the field of oral health care and the Professions of Dentistry and Dental Hygiene in Alberta.

Kind Regards,



Brenda Hemmelgarn, MD, PhD
Dean



January 17, 2022

Letter of Support for a Dental Assisting (DA) Program:

I am writing this letter in support of the creation of an DA program within the Faculty of Medicine and Dentistry, School of Dentistry. In my position as a clinical educator and private practice dentist, I understand the valuable role a dental assistant plays in the delivery of safe and efficient dental care.

One of the many roles of the chairside dental assistant is helping create a safe working environment. This is achieved through preparation of the operatory, helping the patient feel comfortable, transferring instruments to the operator and aerosol reduction with high volume evacuation. In addition, the dental assistant will become certified in several intraoral duties. This improves the workflow of the dental appointment.

Having the students in our DDS program work with students training to become DAs will be an incredible benefit to both groups of students. The team approach to delivering dental care is the standard in private practice. The sooner we have our DDS students exposed to this dynamic the better clinicians they will become.

Another benefit to this partnership will be the increases in efficiency and increased volume of patient care provided within the Oral Health Clinic at the Kaye Edmonton Clinic.

I strongly support the development of the Dental Assisting program at the School of Dentistry.

Kind Regards,



Blaine AuCoin BSc DDS
Clinical Assistant Professor
Associate Chair Student Affairs
Comprehensive Care Director

School of Dentistry
College of Health Sciences
Faculty of Medicine and Dentistry
ECHA 5th Floor 11405-87 Ave. NW Edmonton, AB T6G 1C9

T 587.985.8388
baucoin@ualberta.ca



January 14, 2022

RE: Support for School of Dentistry, Dental Assisting Program

To whom it may concern,

Now, more than ever, the School of Dentistry needs to become creative in how it provides a clinical learning environment to its students that closely mirrors a dental private practice setting without incurring additional costs.

It is important to recognize that dental assistants are an integral part of the dental care team. I fully endorse the proposal for creating a Dental Assisting program that would most certainly be beneficial not only for the School of Dentistry, as an additional revenue stream, but for dental students and future dental assisting students as well.

Because dentists and dental assistants work very closely together in clinical practice, it makes good sense to have learners of both programs undergo clinical training together. Having dental assisting students working with dental students would foster growth of foundational working relationships and a common understanding of roles and responsibilities as they relate to each provider's educational program. As dental assisting students would receive practical hands-on training in a highly supervised clinical environment, they, in turn, would be providing dental students with much needed support that would maximize their clinical learning experiences and improve their overall clinical efficiency as operators. This would ultimately lead to positive impacts on patient care in not only the learning environment but in future private practice settings as well.

Most recently, the importance of four handed dentistry made its way to the forefront in the midst of the COVID-19 pandemic. Limiting the spread of aerosols by having a chairside assistant provide high volume evacuation during AGPs proved to be crucial in keeping our clinical environment safe. Unfortunately, the School of Dentistry is simply not in the financial position to bear the cost of providing additional clinical support in the form of a dedicated chairside assistant for each dental student during their course of clinical training.

Given the current economic climate, it is important to push beyond our limits and think strategically about how to not only sustain but improve our clinical operations during these most challenging times.

Kindest regards,

Dr. Doris A. Lunardon BSc, DDS
Associate Chair, Clinical Operations

School of Dentistry

College of Health Sciences
Faculty of Medicine & Dentistry

8B.105Y Kaye Edmonton Clinic, 11400 University Ave, Edmonton AB T6G 1Z1

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lunardon@ualberta.ca

ualberta.ca/school-of-dentistry



Office of the Department Chair, School of Dentistry
Faculty of Medicine and Dentistry
5-478, Edmonton Clinic Health Academy
University of Alberta
11405-87 Avenue, NW
Edmonton, AB Canada T6G 1C9

February 7, 2022

Letter of Support - Dental Assisting Program

Dear Dr. Paul Major,

As the President of the University of Alberta Dental Students' Association (DSA), I write to you on behalf of all the Dentistry and Dental Hygiene students that the DSA represents. We greatly appreciate the time and willingness from the University to hear the student body perspective with regards to the proposed Dental Assisting program. The implementation of a new program within the School of Dentistry will have an impact on the Doctor of Dental Surgery program and I would like to share the DSA's thoughts on it.

The DSA encourages and promotes professional collaboration between the Dentistry and Dental Hygiene students. We would positively benefit from the addition of a Dental Assisting program as it will allow for increased quality of patient care and facilitate opportunities to practice four-handed dentistry. As we train for life after graduation, it will prove beneficial to simulate the clinical experience as close as possible to that of private practice. Having the opportunity to work closely with Dental Assisting students will improve our education and set an example for building working relationships. We will grow alongside the Dental Assisting students while learning to understand each other's roles and responsibilities.

Furthermore, it proves beneficial to see a similar program being offered by the University of Saskatchewan. With consultation and advice from the University of Saskatchewan, the University of Alberta School of Dentistry can create a Dental Assisting program that will aim to achieve positive outcomes for all students. The School of Dentistry's Oral Health Clinic provides services in many disciplines, including Periodontology, Oral Medicine, Orthodontics, Oral Surgery, and more. The Dental Assisting students will have access to many exceptional learning opportunities. Additionally, the students will have the chance to

participate in off-campus activities involving community engagement. The School of Dentistry allows current students to participate in external rotations at Shine Dentistry, Boyle McCauley Dental Clinic, and Glenrose Rehabilitation Hospital. The Dental Assisting students can give back to their community through these rotations and enhance their clinical experience in different settings.

Another aspect of the School of Dentistry that will enhance the quality of the Dental Assisting program, is the unique hands-on experience in other support roles. The Oral Health Clinic houses over a hundred dental chairs and therefore, we have a large support staff team. The Dental Assisting students will have the chance to learn how they can be involved in Dispensary, Material Management, and Central Sterilization. The importance of a Dental Assistant can not be understated. Dental Assistants are a vital component to the dental team. The DSA supports the implementation of a Dental Assisting program at the University of Alberta. We also recognize how this program will assist in meeting the needs of the oral health workforce. The data and trends outlined in the Labour Market Assessment of October 2021 indicate there is a shortage of Dental Assistants in Alberta. We hope the Dental Assisting program at the University will help offset this shortage and have a positive impact on the delivery of oral health care in Alberta.

For over a century, the School of Dentistry has provided a much-needed service to Albertans. The DSA is eager and looking forward to the addition of a Dental Assisting program. We are also excited to expand our student body to include the Dental Assisting students and provide them with the resources and opportunities to participate in student activities. It is a top priority of ours to ensure our students are learning in the best academic environment possible. The Dental Assisting program will be a significant contribution to the delivery of excellent patient care at the School of Dentistry's Oral Health Clinic. Thank you again for considering the perspective of the DSA. The School of Dentistry has the support of the DSA in implementing the Dental Assisting program.

Ana Khehra

BMSc, DDS 2022 Candidate
President of the Dental Students' Association



January 18, 2022

Dr. Paul Major
Chair, School of Dentistry
University of Alberta

Dear Dr. Major,

Please accept this enthusiastic letter of support for the planned establishment of a Dental Assisting Program in the School of Dentistry, University of Alberta. As you know, the College of Dentistry, University of Saskatchewan implemented a new 30-seat Certificate in Dental Assisting (CDA) Program in September 2018. Since that time, we have graduated 3 cohorts of students, have expanded our CDA student numbers to 52 per year, and achieved Accredited Program status with no reporting requirements through the Commission on Dental Accreditation of Canada.

The addition of this CDA program to our college offerings has allowed us to better meet the oral health workforce needs in Saskatchewan, provided training opportunities for the province's young adults, and has improved the educational experience of our dentistry (DMD) students. The latter advantage stems from the fact that an in-house CDA program allows us to match DMD and CDA students into clinical pairs thereby eliminating the need for dental students to work alone in patient care. The result is a better trained team, more timely completion of patient appointments, and the improved patient safety that comes with the enhanced infection prevention and control inherent in a team approach.

The establishment of a new Dental Assisting program in the School of Dentistry, University of Alberta will also bring other advantages to the dental school. These include the following: the ability to reduce the number of staff dental assistants supporting your DMD program by assisting dental students; ability to reduce the number of staff supporting instrument reprocessing; and, in the future, add Continuing Education course opportunities by offering an accredited Orthodontic Assistant module within your graduate Orthodontic Program.

It is without any hesitation that I recommend establishing a new Dental Assisting program in the School of Dentistry, University of Alberta. I am confident that you will find it to be a great addition to the Dental School, and that within a short period of time, your dental students will tell you that they don't understand how they were ever able to work without a partner dental assisting student. Please feel free to contact me if you have any further questions.

Dr. Doug Brothwell

Dean, College of Dentistry



January 25, 2022

Dr. Paul Major
Chair, School of Dentistry
University of Alberta
5-478 Edmonton Clinic Health Academy
11405 - 87 Ave. NW
Edmonton, AB T6G 1C9

Dear Dr. Major,

The Alberta Dental Association and College (ADA&C) supports the University of Alberta's Faculty of Dentistry pursuing the creation of a Dental Assisting Program.

As illustrated by the University of Saskatchewan's successful collaborative DMD and Dental Assisting Programs, the addition of such a program in Alberta will increase learning opportunities for students, as well as enhance patient care.

Dentists and dental assistants work closely together in clinical practice; the potential for shared educational experience will offer students of each program a base foundation of the working relationship, and a common understanding of the roles and responsibilities of each profession.

Enhancing the team approach from the onset will lead to a better-trained team, positive time management of patient appointments, improved patient safety, and enhanced infection prevention and control. A dental assisting program will also allow for learning opportunities of four-handed dentistry.

This program could also provide unique learning opportunities in various clinical settings offered at the School of Dentistry's Oral Health Clinic (Periodontology, Oral Medicine, Orthodontics, General Practice Residency program, Undergraduate Implant Clinic, and the Undergraduate Oral Surgery clinic), and ultimately, increase the quality of care for Faculty of Dentistry patients.

The ADA&C can confirm that the need for qualified dental assistants is high. In October 2021, Avens Evaluation Group Ltd. completed a Labour Market Assessment that clearly indicated there are not enough trained Registered Dental Assistants (RDA) to meet the volume of employers seeking RDAs. A Dental Assisting Program through the School of Dentistry will aid the workforce in Alberta.

We strongly believe that the addition of a Dental Assisting Program at the University of Alberta's School of Dentistry will increase student learning opportunities, and patient care. This would be of great benefit to Albertans and to the profession of Dentistry.

The ADA&C is proud to support this initiative.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Croutze". The signature is stylized with a large initial "R" and a cursive "Croutze".

Dr. Randall Croutze
Chief Executive Officer



#210, 10335-178 Street • Edmonton, Alberta • T5S 1R5
Phone: (780)444-9555/ (780)720-6669 • Fax: (780)444-9411 • drh@dentalchoice.ca
www.dentalchoice.ca

February 2, 2022

To whom it may concern, University of Alberta:

Re: Proposed Dental Assisting School

Thank you for the opportunity to provide our perspective regarding the proposed Dental Assistant Program at the University of Alberta. Our dental group, Dental Choice, has been a significant provider of professional dental services in Alberta for over 30 years. On this basis, we feel well positioned to provide industry-based feedback on the need for dental assistants in Alberta. We operate 20 clinics and are involved in all facets of dental services, including management of dentists and all staff. We are also proudly Albertan and have a substantial number of U of A graduates on our team - this would include a significant number of dentists and dental hygienists, in our 200-employee sized company.

There are many reasons why we would strongly endorse a Dental Assisting program at the U of A. Let me encapsulate them for you here, and if you want more detail, certainly feel free to reach out to us.

1. The quality of U of A education in the dental discipline is elite. The dentists and hygienists we get from the programs are amongst the finest. We can readily and proudly hire them, and they have the professionalism needed to serve Alberta patients at a high level. We are confident that Dental Assistants would be in the same class. This is important because not all dental assistants are equal, as some schools have higher admission and graduation standards than others.
2. The opportunity for dental students to directly work with student assistants makes significant operational sense. There is a natural synergy that would effectively create strong graduates, if assisting students worked with dental students. In most assisting schools, the assistants actually work very little with real dentists or real students. A direct training relationship would help both the dental program and the assisting program to be more real world ready.
3. There is a significant supply shortage of dental assistants in Alberta. Our anecdotal experience is that most dental assistants only stay in their career a relatively short period of time. Not only is it a physically demanding job, but most of the assistants also must balance family obligations, which frequently leads to part time availability or even early exit from the career. Many dental offices in Alberta struggle to find dental assistants, especially in rural areas, or in evenings in the urban areas. This leads to either an inappropriate increase in wages, and hence costs to the patients, or simply higher use of untrained or under-trained staff.

February 2, 2022

4. Dental assisting is an increasingly complex service. There are 9 different dental disciplines, and each have sub-components that need significant skill to assist and support. In the same way that nursing is not just a monolithic medical discipline, dental assisting has many components, and gets more complex as dentistry evolves. Strong dental assistants would be very suitable in a university environment, where there would be the appropriate mix and extensive range of training that a modern assistant needs.
5. The marketplace pays well for dental assistant training, and I am very confident that enrollment would be high. In fact, I believe the school would be well over-subscribed, which would allow you to take excellent candidates.
6. Further synergies exist between Dental Choice and the University of Alberta with respect to practicum opportunities for Dental Assisting students. We offer a diverse array of clinics in both Edmonton and Calgary, and a wide variety of dentists that we support. This creates an excellent learning environment for practicum students and creates a built-in opportunity to train in a non-school setting that has a strong administrative and operational structure.

In summary I see a very strong win/win/win here. The patients of Alberta would win by having support from very bright, well-trained assistants. The dental students would receive realistic training in what we call 4 handed dentistry. Dentists of Alberta would have access to more great staff. And, the University would have a highly subscribed program that fits perfectly into the current school model with hygienist and dental students. Adding assistants would round out the dental school very nicely.

As I said, this is my condensed answer, and myself, or my management team would be happy to discuss this further with you. We have approximately 60 dental assistants in our employment, and we train them, and manage their careers. We are well positioned to understand their needs and the industry, we welcome further communication as needed.

Sincerely,



Dr. Hans Herchen
CEO & President
Dental Choice
Cell #: 780.720.6669
E: drh@dentalchoice.ca

Terry K Orsten Professional Corp.

13510 127 St. N.W.

Edmonton, Ab T5L1B9

Paul Major DDS, Msc, FRCD(C)

Professor and Chair, School of Dentistry

Senior Associate Dean, Dental Affairs

Faculty of Medicine and Dentistry

University of Alberta

Dear Paul,

Thank you for showing me the information from your study of Dental Assistant availability for Alberta. It confirmed what I had long suspected from our experience. There is a real shortage of Dental Assistants in Alberta. I would like to take this opportunity to give my full support to your initiative to establish a Dental Assistant Program. Lack of qualified assistants has slowed our ability to grow and serve our patients in the past.

Included in our support would be our willingness to host your students during their practicum rotations. We presently have 8 locations in Edmonton with a further 4 under construction/contract. These will be open well in advance of your program. We could host at all our locations.

Yours truly,



Terry Orsten

Bsc DDS

Paul Major DDS, MSc, FRCD(C)
Professor and Chair, School of Dentistry
Faculty of Medicine & Dentistry
University of Alberta
8440 112 Street NW
Edmonton AB T6G 2R7

January 25, 2022

RE: University of Alberta, Dental Assistant Program

To Dr Major and Others To Whom It May Concern,

As Canada's largest and leading network of dental practices, dentalcorp seeks to partner with universities and colleges across Canada to ensure the supply and quality of dental industry talent for the future. With over 450 practices in our network and over 7,500 team members, this remains a critical imperative for our business.

The supply of Dental Assistants has been a challenge for many years and our industry continues to experience tight supply of candidates, including in Alberta where we have 62 practices.

On behalf of dentalcorp as the largest employer of dental industry talent in Alberta, it is my pleasure to formally support the establishment of a new Dental Assistant program through the University of Alberta. My thanks go to Dr Major and his team for this initiative.

To ensure success and increase employment prospects for graduates, as the largest employer of dental talent in Alberta, I can confirm that dentalcorp will be able to place students for practicum placements and will also be able to offer additional skills for the workforce including career strategies, interview skills, compliance in practice, patient experience or any other topic that would be valuable to share with students or graduates to bridge the program into successful employment.

We look forward to supporting and partnering in any way to ensure the success of the new Dental Assistant program and welcome opportunities to play a meaningful role.

Regards,

A handwritten signature in black ink, appearing to read "Nicola Deall", enclosed in a thin black rectangular border.

Nicola Deall
Chief People Officer

dentalcorp

181 Bay Street, Suite 2600, Toronto, Ontario M5J 2T3
C 416.419.3565
E nicola.deall@dentalcorp.ca



April 3rd, 2022

Dr. Paul Major
Professor and Chair, School of Dentistry
Senior Associate Dean, Dental Affairs
Faculty of Medicine and Dentistry
5-478 Edmonton Clinic Health Academy
11405 – 87 Ave NW
Edmonton, Alberta
T6G 1C9

To whom it may concern,

The Edmonton and District Dental Society (EDDS) fully supports the development of a dental assisting program at the University of Alberta, Faculty of Medicine & Dentistry.

The EDDS board of directors voted unanimously in favor March 10th, 2022 after a thorough presentation was given by Dr. Paul Major on the current state of the dental assisting profession in Alberta.


The EDDS board of directors is a group of practicing dentists that provide continuing education events and support for approximately 300 local dentists. We believe that a dental assisting program at the Faculty of Medicine & Dentistry will help produce skilled dental assistants for private practice. It will also allow dental students to graduate with a skill set more closely aligned to the ones needed for private practice. Such a program allows for the dental assisting students and the dental students to practise working together, allowing for better care of patients and speed of care. Not only will access to dental care at the University of Alberta be improved but having more skilled dental assistants in Alberta will be greatly appreciated by the dental community. We often hear from our colleagues of their difficulties trying to find dental assistants.

The University of Saskatchewan has already put such a program in place and has had huge success.

We appreciate the University of Alberta's initiative in helping the dental professionals.

Sincerely,

Dr. Brett Shkopich DMD
President Edmonton and District Dental Society
Edmonton, Alberta



Labour Market Assessment of Registered Dental Assistants in Alberta

October 29, 2021

Dr. Louise Bahry, MEd, PhD
Director
Avens Evaluation Group Ltd.
LBahry@avensevaluation.com
avensevaluation.com

In representative's absence, contact:

Dr. Dorothy Pinto, MSc, PhD
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Executive Summary

Overview

The University of Alberta School of Dentistry is actively investigating the opportunity to establish a dental assistant training program. Avens Evaluation Group (Avens) was engaged as a third-party to assess the labour market demand for Registered Dental Assistants (RDAs) in Alberta. In addition to reviewing available data on education and labour market trends, Avens engaged key stakeholders to gain their perspectives on the labour market demand for RDAs in Alberta.

Methods

The labour market analysis of RDAs in Alberta required the collection and triangulation of data from multiple sources to gain a comprehensive understanding of the context and labour market trends. These sources included a document review of existing data sources regarding the labour market for RDAs in Alberta. Avens also completed interviews with employers, professional associations, regulating bodies, and RDAs. Finally, surveys of Dentists/Employers and RDAs were fielded.

Results

Anticipated Employment Outcomes. One in five dental assisting students in Alberta choose not to practice as RDAs in Alberta. A review of data from 2017-2019 shows that approximately 20% of students choose not to practice as dental assistants in Alberta. The majority of RDAs who do practice in Alberta perform dental assistant duties as their primary role; however, RDAs also perform other roles with 72% of Dental Assistant survey respondents report having a secondary job description that comprises less than 40% of their working hours. Both the Dental Assistant and Employer survey results indicate that RDAs have limited opportunity to advance in their careers; many do not intend to practice as RDAs long term with half of the respondents under 25 reporting they do not intend to practice as a RDAs in Alberta in 5 years.

Labour Market Demand. A shortage of RDAs has been a long-standing issue in Alberta despite growth in this labour market. Interviewees report the RDA shortage is present across the province but more pronounced in rural areas. This aligns with the Government of Canada's Job Bank assessment of "fair" job prospects for dental assistants across Alberta for the next year and "good" prospects in Wood Buffalo-Cold Lake Region in particular.¹ There is also an anticipated increase in the number of retirements which will impact the labour market. A higher proportion of the labour market being of retirement age will result in a greater number of RDAs exiting the field than in previous years. In addition to this, data shows that a significant number of RDAs exit

¹ <https://www.jobbank.gc.ca/marketreport/outlook-occupation/4475/AB>

the labour market within 10-20 years of practice, with a large proportion exiting the field within 5 years. Many moving into administrative, sales, or treatment coordinator roles – or to leave the dental field entirely.

RDAs are predominantly female (99%) and most entering the profession are between 18 and 30 years of age (72%). Many RDAs take maternity leaves during this period; some returning to practice choose not to work full-time and some choose not to return to practice at all. Key stakeholders propose reasons for not returning to practice following maternity leave include high childcare costs in Alberta and the challenge of finding employment with sufficient schedule flexibility. Those who do return are often seeking more flexible schedules due to childcare concerns.

Data and engagement results suggest that there will be further fallout for this group due to the inconsistent availability of education and childcare and required sick leaves due to isolation requirements throughout the last 18 months of the COVID-19 pandemic. While the full impact of the COVID-19 pandemic on the labour market for RDAs remain to be seen, there are strong indications they have been significant. Interviewees and respondents to the Employer Survey report there has been a reduction in the RDA labour market due to early retirements, fear of contracting COVID-19, dental assistants being hired for COVID response, and reduced immigration due to travel restrictions. We anticipate a larger loss to the labour market than normal will be reflected in the labour data in the year to come, leading to an even larger demand for new graduates.

In addition, there is evidence to suggest that the needs of the employer and the needs of the RDAs themselves are misaligned. Many RDAs are not working their preferred number of hours, position (full time, part time, or casual), or schedule (weekday, weekend, evening). While 57% of General Dentists reported in the Employer Survey that they work evenings, 75% of respondents to the Dental Assistant Survey reported that they would not work evenings. Similarly, while 42% of General Dentists work weekends, 88% of RDAs indicated they would not work weekends, leading to shortages of coverage in dental offices to accommodate the part time schedules of the RDAs.

Evidence of Student Demand. Data from the College of Alberta Dental Assistants shows that prior to the COVID-19 pandemic, available RDA programs in Alberta filled over 95% of their open seats. This was despite the fact that new programs were approved, and existing programs expanded the number of seats available. While employment data is not available for all programs due to the nature of private institutions, NAIT has shown 100% employment post-completion for several years. Private programs offered throughout Alberta are also required to show both graduation and employment outcomes above 70% to remain in operation in Alberta.

Conclusions

Existing labour market modelling data do not appear to fully reflect the experiences of employers consulted for this labour market assessment. Labour market modelling data predict a shortage of RDAs in Alberta, but the extent of this shortage appears to be greater than forecast based on data collected and reviewed for this assessment. The majority of Employer Survey respondents agree it is difficult to recruit RDAs (68%), and many respondents to the Employer Survey agree it is difficult to retain RDAs once they have been hired (20%). Interviewees and Employer Survey respondents report they receive few (if any) applications for open positions and that there is an even greater shortage of qualified candidates in the labour market. Data suggests that there is currently a high demand for RDAs in Alberta as many clinics are currently recruiting RDAs (53% of Employer Survey respondents) and 32% of respondents to the Dental Assistant Survey report that their clinics are currently understaffed in terms of RDAs.

RDA registration numbers do not reflect full-time employment and thereby obscure extent of current shortage. Registration numbers do not reflect full time equivalent positions (FTEs) being worked and include part time and casual employment, mixed job descriptions, and those working out of the province. In addition, existing RDA registration numbers are inadequate to meet current labour market demand. In our consultations with regulatory bodies and employers, the concept of an “ideal 1:2 ratio” of RDAs to dentists and dental specialists was raised repeatedly. However, in consultation with employers, the ideal ratio was not consistently reported.

Given these preferred ratios and the number of registered general dentists and dental specialists in Alberta in 2020, the labour market would require a minimum of 6,301 full-time RDAs where Alberta currently has a total of 6,102 RDAs, resulting in a deficit of 200 full time RDAs. When we consider the number of RDAs working part time, this deficit increases by 546 – 726 full time RDAs. Considering employer’s preferred ratios and RDA’s reported work hours, there is a current deficit in Alberta of 746- 925 full-time RDAs to fulfill the needs of the labour market. Note that this does not account for those general dentists and dental specialists working in excess of full-time hours and the additional RDA support required to facilitate these additional hours.

Given the above, we can only conclude that a significant shortage of RDAs has been building for some time in Alberta. The Alberta’s Occupational Outlook 2019-2028 anticipated a shortage of only 64 RDAs in the province for 2022, however our research and consultations with key stakeholders lead us to estimate this number could currently be as high as 925 full-time RDAs. It must be noted that existing labour market modelling data have yet to reflect the impacts of the COVID-19 pandemic and “The Great Resignation” on the RDA labour market. We also recognize that the current proposed increase in the number of available seats in dental assistant education programs in Alberta for 2022/23 will be insufficient to address the current need, and to meet the current labour shortage there is considerable room for more seats in Dental Assistant programs.

Overview

The University of Alberta School of Dentistry is actively investigating the opportunity to establish a dental assistant training program. Avens Evaluation Group (Avens) was engaged as a third-party to assess the labour market demand for Registered Dental Assistants (RDAs) in Alberta. In addition to reviewing available data on education and labour market trends, Avens engaged key stakeholders to gain their perspectives on the labour market demand for RDAs in Alberta.

Registered Dental Assistants in Alberta

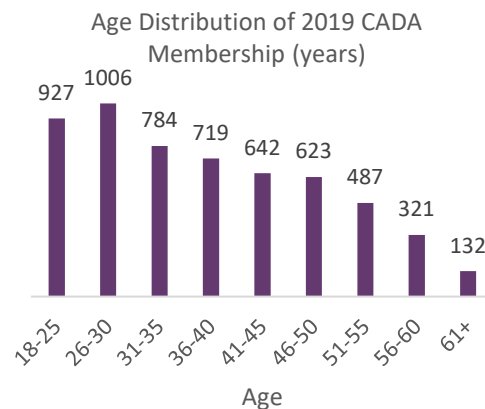
RDAs work with dental health professionals and related agencies as chair-side assistants, intra-oral assistants, administrative assistants, community dental health assistants, treatment co-ordinators, dental reception and insurance co-ordinators, sterilization assistants, or dental education and research assistants.

The College of Dental Assistants of Alberta (CADA) regulates the profession of dental assisting in Alberta and authorizes Registered and Provisional Dental Assistants to provide dental assisting services directly to the public in Alberta. Dental Assistants must have current registration in good standing and a practice permit. In 2021, there were 6,102 Registered and 136 Provisional Dental Assistants in Alberta.

Institutions that provide dental assisting education are accredited by the Commission on Dental Accreditation of Canada (CDAC). Currently, five institutions in Alberta hold accredited program status with CDAC and one holds provisionally approved program status with CADA.

Snapshot of RDAs in Alberta

2019 CADA Membership Statistics Report shows RDAs in Alberta are predominantly female (99%) and between 18 and 40 years of age (61%). Most entering the profession are between 18 and 30 years of age (72%). Most have a job description of Dental Assistant (93%); Other job descriptions include Administration, Educator, Treatment Coordinator, and Sterilization.



Note:
1% of Members practice outside Alberta.

Methods

The labour market analysis of RDAs in Alberta required the collection and triangulation of data from multiple sources to gain a comprehensive understanding of the context and labour market trends. These sources included document review as well as interviews and surveys with key stakeholders, as described in the following sections.

Document Review

The documents reviewed for this labour market analysis provided an understanding of the Alberta context, current labour market, and anticipated labour market trends. Key documents are described in the table below.

Document	Description
Alberta Dental Association and College (ADA&C)	Annual Reports (2018-2020)
Alberta's Occupational Outlook 2019-2028	The 10-year Alberta Occupational Outlook provides a long-term assessment of potential imbalances in the provincial labour market
College of Dental Assistants of Alberta (CADA)	Annual Reports (2017-2021)
Canadian Dental Assistants' Association (CDA)	Salary and Benefits Survey (2011, 2013 only available)
Government of Alberta	Alberta labour market information including average wage and salary (by industry, economic region), requirements, and outlook
2017, 2019 Alberta Wage and Salary Survey	Information on wages and salaries for full- and part-time employees by occupation, region, industry
Institution-specific data	Program graduation and employment rates, mean salaries (available only for NAIT, KDM Dental College, Columbia College)
Media	Articles on labour market trends in Alberta and internationally
Canada's Job Bank Trend Analysis for Dental Assistant in Alberta	Trend analysis results for job opportunities for Dental assistants the next 3 years. ²

² <https://www.jobbank.gc.ca/marketreport/outlook-occupation/4475/AB>

Interviews & Surveys

The School of Dentistry identified key stakeholders to be interviewed by Avens and provided contact information. A total of 9 key stakeholders were interviewed by Avens representing RDAs, employers in private practice and corporations, Dental Assistant associations, the College of Alberta Dental Assistants, and the Alberta Dental Association and College.

Findings from the interviews informed the development of two surveys: (1) a survey of Dental Assistants in Alberta and (2) a survey of all dentists and dental specialists registered in Alberta. These two surveys are described in the following sections.

Dental Assistant Survey

Purpose: To gain perspective on Dental Assistants' current and preferred work as well as their career plans.

Dissemination: Survey disseminated via dental assistant associations and social media. Data collected from September 27 – October 10, 2021

Responses: 209

Respondent Characteristics:

Geographical representation was centred in the Edmonton area for this survey. Only the Calgary Dental Assistant Association shared the survey with their membership; the other associations did not respond to our requests. We were also able to distribute the survey via the Facebook Group "Dental Assistants of Edmonton and Area." Sixty-five percent of respondents were from the Edmonton area, 12% Central Alberta, 11% Calgary area, 7% Northern Alberta, and 6% Southern Alberta. In addition, 69% reported working in urban areas (population over 100,000), 17% in semi-urban areas (population between 30,000 and 100,000), and 14% in rural areas (population below 30,000). Finally, 99% of respondents identify as female and 1% as male.

When asked to identify their primary job description (i.e., role in which they spend 60% or more of their working hours), 88% said they performed Dental Assistant duties as their primary role and 9% said they performed administrative duties as their primary role. When asked to identify a secondary role (i.e., role in which they spend 40% or fewer of their working hours), respondents who had a secondary role reported they perform Dental Assistant duties (26%), sterilization duties (23%), and administrative duties (12%).

Employer Survey

Purpose: To understand staffing needs, challenges, and opportunities of Alberta employers of Dental Assistants.

Dissemination: Questions were drafted by Avens and provided to ADA&C for inclusion in their membership survey.

Data collected from September 22 – October 8, 2021

Responses: 166 (93% General Dentists; 7% Specialists)

Respondent Characteristics:

There was representation from across Alberta among the survey respondents. Thirty-seven percent of respondents were from the Calgary area, 33% Edmonton area, 12% Central Alberta, 10% Northern Alberta, and 8% Southern Alberta. In addition, 64% reported working in urban areas (population over 100,000), 20% in semi-urban areas (population between 30,000 and 100,000), and 15% in rural areas (population below 30,000).

General Dentists reported they have practiced between 1 and 50 years (median 18 years). Twenty-five percent of General Dentists report they are solo practitioners, 58% work with one or two other dentists, and 17% work with four or more other dentists. The majority of General Dentists responding to the survey intend to practice in Alberta for the next three years (95%). Those who do not intend to practice in Alberta for the next three years ranged from early to late career and from across the province.

Results

Registered Dental Assistant Labour Market Trends in Alberta

The 2019-2028 Alberta Occupational Outlook³ (the Outlook) provides a long-term assessment of potential imbalances in the provincial labour market. Expected trends in job openings are compared to the potential pool of job seekers to calculate shortages or surpluses. The Outlook utilizes two models of Demand and Supply to provide its forecasts.

According to this report, by 2022, Alberta is expected to have a shortage of RDAs that will continue to grow until at least 2028. The number of expected job seekers is not expected to keep pace with the number of job openings (see Table 1). The overall outlook for RDAs in Alberta is currently rated as “above average.”⁴ This aligns with the Government of Canada’s Job Bank assessment of “fair” job prospects for dental assistants across Alberta for the next year and “good” prospects in Wood Buffalo-Cold Lake Region in particular.⁵

Table 1. Alberta Occupational Outlook for Dental Assistants

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Job Openings	311	309	369	463	465	446	452	438	450	449
Job Seekers	335	339	350	363	374	377	373	372	376	381
Cumulative Imbalance	-24	-54	-35	65	156	225	304	370	444	512

Shortages beginning in 2023 for the overall Alberta labour market are expected to be mainly driven by the need to replace workers due to retirement (65%) and to a lesser extent by expansion demand (35%). CADA’s 2019 Membership Statistics show that 453 of their 5641 members (8%) were over age 55. This group can be expected to retire within the next two to seven years.

The Outlook forecasts are produced using two models that carry assumptions that are subject to change in the future. One source of change is the emergence of the COVID-19 pandemic. The modeling for the 2019-2028 Outlook was completed prior to the COVID-19 pandemic, which has exacerbated shortages in many fields, including dentistry. Although labour market data for this period is not yet available, we have indications the labour market for RDAs has been impacted.

³<https://open.alberta.ca/dataset/8987e228-9ffa-4a2e-9f79-a9b869df2ccb/resource/502659ff-47fb-4ce3-94db-6a0c2f1f722c/download/lbr-albertas-occupational-outlook-2019-2028.pdf>

⁴ <https://alis.alberta.ca/occinfo/occupations-in-alberta/occupation-profiles/dental-assistant/>

⁵ <https://www.jobbank.gc.ca/marketreport/outlook-occupation/4475/AB>

The College of Alberta Dental Assistants (CADA) held an online workshop in May 2021 wherein 20% of RDAs reported that they have not returned to practice after the March 2020 shutdown.

Dental Assistant Education Trends

Education trends are an important consideration for the dental assistant labour market as the majority who complete their education in Alberta remain to practice in the province and comprise the majority of new RDAs in the province each year. In 2021, 81% of new registrants with CADA had completed their Dental Assistant education in Alberta⁶. Alberta-based dental assisting education programs are the key source of new labour in this market. Table 2 shows the total possible enrollment in Alberta Dental Assistant programs as well as confirmed enrollment in these programs from 2017 to 2020. Enrollment for 2021 is not yet complete, and the possible enrollment for 2022 is an estimate based on approval of a new program and an expanded program to begin in 2022/23. As shown in Table 2, Dental Assistant programs prior to the COVID-19 pandemic maintained registration numbers above 95%.

Table 2. Possible and Confirmed Enrollment in Dental Assistant Programs in Alberta 2017-2022⁷

	2017	2018	2019	2020 ¹	2021	2022 ²
Total Possible Enrollment	486	523	488	462	562	694 ³
Total Enrollment	487	517	464	366	473	

¹Some schools reduced seats due to COVID-19

²One school will add 36 seats for 2022/23; and newly approved school will add 96 seats 2022

³Estimated by CADA.

Dental Assistant Registration Trends

Annual reports of the College of Dental Assistants of Alberta (CADA) disclose the number of RDAs able to provide dental assisting services directly to the public in Alberta. Table 3 and Table 4 outline the registration trends for RDAs with CADA for new and ongoing members from 2017 to 2021. There have been small increases of registrants from Alberta each year. The proportions of other Canadian and International registrants have remained relatively stable over the five-year period except for a drop in international registrations in 2021 which is likely due to COVID-19 restrictions around travel.

⁶ 2020-21 Annual Report of the College of Alberta Dental Assistants.

⁷ Source: Interview with CADA representative.

A comparison of confirmed enrollment in dental assisting education programs in Alberta (Table 2) with new CADA registrants from Alberta programs from 2017-2019⁸ (Table 3) reveals approximately 20% of students choose not to practice as dental assistants in Alberta. CADA is aware of this discrepancy and is promoting its student membership status in order to better understand and monitor the issue.⁹

RDA registration trends demonstrate the labour market is experiencing consistent growth. Table 4 shows a trend of an increase in total CADA registrations in Alberta from 100-200 additional registrants per year. That is, in addition to replacing those who have allowed their CADA registrations expire due to leaving the field or retirement, there are an additional 100-200 new RDAs in Alberta each year.

Table 3. CADA – New Registrants 2017-2021¹⁰

New Registrants	2017	2018	2019	2020	2021
Alberta Programs	314	380	384	375	406
Other Canadian	60	86	83	66	63
International	49	49	45	54	34
TOTAL	423	515	512	495	503
Reinstatements	267	257	209	210	197
Not Approved	9	5	4	6	5
Received	699	777	725	711	705
Decision Reviews	-	-	-	-	-

⁸ Total enrollments from 2017-2019 were compared with total new CADA registrants from Alberta programs from 2018-2020 to account for differences in how these data were reported (enrollment reported by calendar year, CADA registrants reported by fiscal year) and for students registering after program completion.

⁹ Source: Interview with CADA representative.

¹⁰ Source: CADA Annual Reports <https://abrda.ca/about/annual-reports/>

Table 4. CADA – All Registrants 2017-2021¹¹

Members	2017	2018	2019	2020	2021
Registered DAs	5407	5667	5869	5953	6102
Provisional DAs	103	115	44	53	136
Courtesy RDAs	0	0	1	1	0
LOA	260	245	285	261	211
Students	123	108	79	200	195

Registered Dental Assistant Expectations and Career Plans

Table 5 through Table 8 provide results from the Dental Assistant survey around current and preferred work as well as career plans. Table 5 shows the average number of hours RDAs report working per week and the average number of hours they would prefer to work per week. Fifty-two respondents reported wanting to work more hours on average (an increase of 1 to 20 hours per week), and 56 reported wanting to work fewer hours on average (a reduction of 1 to 24 hours per week). Overall, 61% of respondents reported they do not work their preferred number of hours.

Table 5. RDAs Reported Work Hours/Week vs. Preferred Work Hours/Week

	Minimum	Maximum	Average
Actual Hours/Week	8	75	33.7
Preferred Hours/Week	0	80	33.1

Table 6 shows the proportion of respondents to the Dental Assistant survey who are currently working evenings and weekends, and those who would prefer to work evenings and weekends. Survey results showed that 88% of respondents are not willing to work weekends, and 75% are not willing to work evenings. There is again some misalignment in actual and preferred work schedules.

Table 6. RDAs Reported Work Schedule vs. Preferred Schedule

	Evenings	Weekends
Actual Schedule	33%	26%
Preferred Schedule	5%	5%

¹¹ Source: CADA Annual Reports <https://abrda.ca/about/annual-reports/>

Table 7 shows the results from the Dental Assistant survey around current and preferred full-time equivalency (FTE). Five percent of respondents who currently work full time would prefer a part-time schedule and 5% who work part time would prefer to move to a full-time schedule.

Table 7. RDAs Reported FTE vs Preferred FTE

	Full Time	Part Time	Casual
Actual FTE	77%	22%	1%
Preferred FTE	72%	27%	2%

Table 8 shows the overall results around respondents' plans to practice as a Dental Assistant in Alberta in one year, five years, and 10 years. Nearly half of respondents under the age of 25 do not expect to practice in Alberta as a Dental Assistant in 5 years. For those who do not plan on being a Dental Assistant in one year, age was not a factor as these respondents ranged in age from 20 to 57 years.

Table 8. Dental Assistants Career Plans

	Yes	No	Unsure
Do you plan on being a dental assistant in Alberta in 1 year?	89%	4%	8%
Do you plan on being a dental assistant in Alberta in 5 years?	58%	17%	25%
Do you plan on being a dental assistant in Alberta in 10 years?	33%	36%	31%

Of those who do not plan to be a Dental Assistant in the future, most provided reasons pertaining to retirement, family planning, and moving into a new career/education program. Those who reported they are unsure about their plans were asked what it would take for them to stay; many indicated wages and work environment were their factors for consideration.

Overall, the results of the Dental Assistant survey indicate a misalignment in current working conditions and expectations on the part of the RDAs. Many are not working their preferred position (full time, part time, or casual), number of hours, or schedule (weekday, weekend, evening). It should also be noted that when asked what was important to respondents when accepting a position with a clinic, work schedule was ranked third, after wage and office culture, respectively.

Employer Perceptions of Labour Market for RDAs in Alberta

The employer survey asked several questions around work schedule and hours for practicing General Dentists, as well as direct questions around their challenges in recruiting RDAs. Overall, General Dentists report working a median of 35.0 hours per week. However, hours worked per week varied by number of years of practice. General Dentists in the first 10 years of their careers generally work more hours per week than those later in their careers (Median = 40.0 hours; Range = 20-60). This trend was also observed with respect to extended hours (i.e., evenings and weekends). Survey results from the employer survey indicate that overall, 57% of General Dentist work evenings and 42% work weekends. However, General Dentists in the first 10 years of their careers are more likely to work at clinics with extended hours with 77% of respondents indicating they work evenings and 64% weekends. The proportion of respondents who work evenings and weekends drops to less than half among those who have been practicing over 10 years.

Employers reported they have experienced significant challenges in recruiting RDAs for years. The majority of employers who responded to our survey agree it is difficult to recruit to these positions (68%); few employers disagree recruitment is a challenge (4%). Retaining RDAs once they have been hired also poses a challenge to 20% of employers. In both the employer survey and interviews with employers, we heard there are generally very few (if any) applications for job postings, and even fewer qualified candidates to choose from. It was noted by several employers that there are often no-shows for interviews, and if the employer takes more than a couple of days post-interview to make an offer, the candidate has already moved on to another position.

To compete for the limited number of Dental Assistants, employers have had to offer incentives, which many note are not sustainable. Incentives offered include higher wages, benefits, health spending accounts, signing bonuses, paying for education, and paying annual licensing fees. Some employers have resorted to hiring unqualified Dental Assistants who cannot practice to full scope, offering to pay for Dental Assistants to move from out of province, and poaching Dental

“There are so many people who I have interviewed with experience, and they work very limited hours and cannot work any evenings and weekends. So multiple staff are required to fill even a full-time position.”

– Alberta Employer

“I have been trying to hire RDAs to replace maternity leaves or those who move away, and it averages me over 4 months to find one. [...] Even if [RDAs] are not providing good compassionate care to my patients, I cannot constructively criticize them to train them in fear that they quit and find another job because so many offices are also looking. So patients’ overall care is not optimal.”

– Alberta Employer

Assistants from other clinics. There also appear to be regional differences across Alberta; RDAs can be particularly difficult to attract to rural clinics.

Half of all respondents to our Employer Survey (53%) work at clinics currently recruiting for at least one RDA position. Half of all respondents anticipate recruiting RDAs in the next 6 months, a third anticipate they will be recruiting in the next 12 months (Table 9). In addition, 32% of employers indicated that their clinics are currently understaffed, impacting patient care.

Table 9. Recruitment Expectations

Type	n	Expect to Recruit in 6 months	% 6 months	Expect to Recruit in 12 months	% 12 months
General Dentist	154	79	51%	46	30%
Specialist	11	4	36%	4	36%
Total	165	83	50%	50	30%

Several interviewees reported they have struggled to fill RDA positions for several years, noting that existing labour market modelling data do not appear to fully reflect the experiences of employers consulted for this labour market assessment. One interviewee stated their corporation currently has 22 open RDA positions in Alberta and that it takes an average of 35 days to fill open positions. Employers indicated in the survey that they are unable to fill leaves or replace staff within a reasonable time, sometimes taking months to do so. When asked directly about the current Alberta labour market for RDAs, the majority of respondents reported there is a shortage of RDAs (83%). Half of all respondents qualified this as a “significant shortage” (54%).

“We have been looking for a couple years to fill RDA positions but are unable to. Therefore, we have been forced to hire uncertified staff [medical office assistants, sterilization techs]. On occasion, the dentist has to do all radiographs, rubber dams, temps, and impressions as there are no registered staff available. Previously, we had registered staff who would temp if our registered staff was away, but there are no extra certified staff that want extra hours. We were unable to fill a maternity leave for a registered staff member as no one wanted a temporary position [...]. There is an extreme shortage of qualified and certified RDAs in our area.” – *Alberta Employer*

Table 10. Employer Perception of Shortages of RDAs in Alberta

In your opinion, which statement best describes the current Alberta labour market for Registered Dental Assistants (RDAs)?	n	%
Alberta has a significant shortage of RDAs	84	54%
Alberta has somewhat of a shortage of RDAs	44	28%
Alberta has the right amount of RDAs	10	6%
Alberta is somewhat oversaturated with RDAs	9	6%
Alberta is significantly oversaturated with RDAs	8	5%
Total	155	

When asked how many RDAs Dentists and Dental Specialists would ideally like to have directly support their work, most survey respondents reported a ratio of 1:2 (58%). However, a third of respondents (31%) would ideally like to have three or more RDAs directly support their work. Applying the preferred ratios reported by our respondents to all regulated General Dentists and Dental Specialists in Alberta for 2020 (Table 11), a minimum of 6,301¹² full-time RDAs would be required to support the work of 2,864 full time General Dentists and Dental Specialists in Alberta. Note that this does not account for those Dentists working more than full-time hours and the additional support required to facilitate these additional hours.

Table 11. Number of Regulated Dentists in Alberta by Category 2018-2020

Regulated Dentists	2018	2019	2020
General Dentists	2194	2512	2525
Dental Specialists	293	327	339
Education & Research	60	57	58
Courtesy Registration	5	6	6
Volunteer Registration	5	2	2
Total	2552	2901	2930

¹² This includes a 2:1 ratio for 58% of Dentists and Dental Specialists, 3:1 ratio for 31% of Dentists and Dental Specialists, and 1:1 ratio for the remaining 11% of Dentists and Dental Specialists

Context Trends

Impacts of COVID-19 Pandemic on RDA Labour Market

Available government data on labour market supply and demand do not yet reflect the impacts of the COVID-19 pandemic. The shortage of RDAs, a reality for years prior to the pandemic, has become more acute, indicating these impacts have been significant for RDAs in Alberta. It remains to be seen if these will be transitory or long-term impacts on the labour market. Key stakeholders observed factors contributing to increased shortages in the short-term as well as to RDAs leaving the profession:

- Requirements for individuals to isolate when symptomatic increased vacancies that needed to be filled.
- Many clinics laid off RDAs early in the pandemic. Not all layoffs were handled well. The College of Alberta Dental Assistants (CADA) held an online workshop in May 2021 wherein 20% of RDAs reported that they have not returned to practice after the March 2020 shutdown.
- The work environment has become less desirable as RDA workloads have increased due to the need to follow COVID protocols.
- Many RDAs left the profession from fear of personal risk due to COVID transmission and many who are older may have chosen to retire early.
- RDAs with school age children may have lost consistent childcare or may have needed to support children at home with online schooling throughout the pandemic. The federal government also provided financial supports during the pandemic. Families needed to make decisions on how to best manage their individual situations.
- There was increased competition for RDAs with Alberta Health Services (AHS) hiring to fill COVID-Response positions, including positions to conduct COVID-19 testing.
- Dental Assisting programs reduced their enrollment numbers, leading to fewer RDAs entering the profession.

Generational Expectations of Work and Career Trajectories

The labour market is anticipated to shrink in many areas due to the retirement of the Baby Boomer generation, many of whom had put off retirement due to economic shifts, resulting in a larger than expected loss to the labour market.

Two other generations in particular should be considered when thinking about the labour market for RDAs in Alberta: Generation Y (Millennials) and Generation Z (Gen Z). Currently, those most likely to be entering the field of Dental Assisting would be categorized as younger Millennials and older Gen Z's. These two generations have different expectations of their work and careers than previous generations. Large-scale surveys conducted by Deloitte¹³ and PwC¹⁴ have outlined the expectations of these two generations. Of particular relevance is the rising importance in these two generations of flexibility in work, the clear presence of a career trajectory, and a shift in the balance of power between employer and employee. Those now entering the labour market are considered to be “loyalty-lite”, having the confidence to change employers when their needs are not being met, particularly around work flexibility and a pre-defined and attainable career trajectory.

Extent of Generational Shift

In 2019, Registered Dental Assistants in Alberta were:

- 8% Baby Boomers
- 31% Gen X
- 44% Millennials
- 16% Gen Z

In 10 years, we can expect all Baby Boomers to have retired and approximately 50% of RDAs in Alberta will be Gen Z.

Shrinkage of the labour market due to the retirement of the Baby Boomer generation, in addition to what is being termed “The Great Resignation¹⁵” - the result of the COVID-19 pandemic and changing attitudes and expectations of work - provide later generations with the confidence to find jobs and employers that best fit with their expectations, rather than take what is offered.

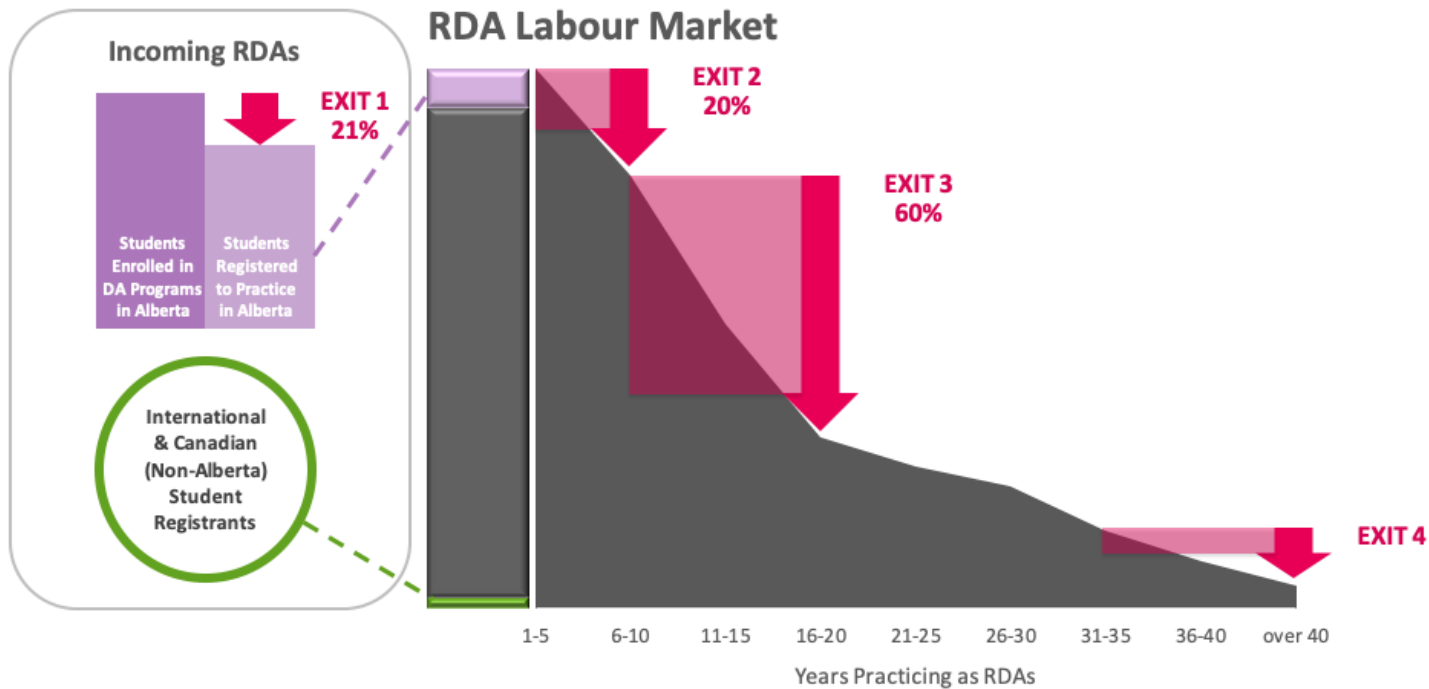
Key Exits Points from Registered Dental Assistant Labour Market

Four key exit points from the labour market were identified for RDAs based on results of interviews with key stakeholders, survey data from employers and dental assistants, and available data on RDAs practicing in Alberta. In particular, the 2019 CADA Membership Statistics Report was used to estimate proportions of RDAs exiting the labour market over time as this report provides age and number of membership years for all members.

¹³<https://www2.deloitte.com/us/en/pages/consumer-business/articles/understanding-generation-z-in-the-workplace.html>

¹⁴ <https://www.pwc.com/co/es/publicaciones/assets/millennials-at-work.pdf>

¹⁵ <https://hbr.org/2021/09/who-is-driving-the-great-resignation>



The figure above identifies the four key exit points with respect to number of years of practice as an RDA in Alberta. Each exit point is described below:

- Exit 1–** As noted earlier, a comparison of confirmed enrollment rates in Alberta Dental Assistant education programs with new CADA registrant rates for RDAs from Alberta programs from 2017-2020 shows approximately 21% of students chose not to register to practice in Alberta. Key stakeholders propose this may be due to a realization that the profession is not a good fit for the individual after completing the clinical component of their program.
- Exit 2 –** Within the first ten years of practice, approximately 20% of RDAs exit the labour market. Key stakeholders propose this may be due to an inability to find a good employment fit with a clinic or to a realization that the profession is not a good fit for the individual, and often these exits occur within 1-5 years of employment in the field.
- Exit 3 –** Between 10 and 20 years of practice, approximately 60% of RDAs exit the labour market. This constitutes the greatest reduction in the overall labour market. Key stakeholders highlighted demographic and career considerations for this reduction.

Demographic Considerations: Data demonstrate the RDA labour market is predominantly female and generally young. Many RDAs take maternity leaves during this period; some returning to practice choose not to work full-

time and some choose not to return to practice at all. Key stakeholders propose reasons for not returning to practice following maternity leave include high childcare costs in Alberta and the challenge of finding employment with sufficient schedule flexibility. A comparison of member Leaves of Absence from 2017-19 and Reinstatements from 2018-20¹⁶ reported in CADA Annual Reports indicate 14% of those who take Leaves of Absence do not return to practice.

Career Considerations: Key stakeholders propose RDAs may choose to move on to other careers including administration, management, and other dental fields. There is little career trajectory available to RDAs without leaving the profession.

Exit 4 –

From 31 years of practice onwards, we see rapid decline in the labour market due to retirement. Key stakeholders observed older RDAs may choose to move to other positions such as administration due to the high physical demands of an RDA. Further, historical demographic data provided in the 2019 CADA Membership Statistics Report demonstrate that the proportion of the overall RDA labour market approaching retirement age has increased from 12% to 17% from 2010 to 2019. We can therefore assume declines due to retirement could be greater in the next few years.

¹⁶ Assuming Leaves of Absence were 1 year in length.

Key Considerations of Registered Dental Assistant Labour Market in Alberta

The following outlines the key considerations for assessing the labour market demand for RDAs in Alberta and supporting rationale. Considerations are reported in four sections: anticipated RDA employment outcomes, student demand for dental assistant education programs, labour market demand for RDAs, and reflection on labour market demand for RDAs.

1. Anticipated RDA Employment Outcomes

One in five dental assisting students in Alberta choose not to practice as RDAs in Alberta.

- A comparison of confirmed enrollment in dental assisting education programs in Alberta (Table 2) with new CADA registrants from Alberta programs from 2017-2019¹⁷ (Table 3) reveals approximately 20% of students choose not to practice as dental assistants in Alberta. Data on their employment outcomes are not available.

The majority of RDAs perform dental assistant duties as their primary role; however, RDAs also perform other roles.

- 88% of the Dental Assistant Survey respondents report dental assistant as their primary role. Of these, 26% reported a secondary role of sterilization and 14% of administration.
- 12% of the Dental Assistant Survey respondents report dental assistant as their secondary role (i.e., comprising less than 40% of their working hours).
- 93% of CADA members in 2019 had 'Dental Assistant' as their job description. The other 7% reported job descriptions including administration, educator, treatment coordinator, and sterilization.

RDAs have limited opportunity to advance in their careers; Many do not intend to practice as RDAs long term.

- 17% of the Dental Assistant Survey respondents do not intend to practice as RDAs in 5 years; 36% do not intend to do so in 10 years.
- Nearly half of the Dental Assistant Survey respondents under the age of 25 do not intend to practice as a RDAs in Alberta in 5 years.
- In contrast, the majority of General Dentists responding to the Employer Survey intend to practice in Alberta for the next three years (95%).

¹⁷ Total enrollments from 2017-2018 were compared with total new registrants from Alberta programs from 2018-2019 to account for differences in how these data were reported (calendar vs. fiscal year) and for students registering after program completion. Data from 2020 and 2021 were not used as COVID-19 greatly impacted Alberta program enrollment.

2. Evidence of Student Demand

The demand from students for dental assistant education programs in Alberta appears to remain strong.

- Dental assistant education programs in Alberta maintained enrollment numbers above 95% prior to the COVID-19 pandemic even as existing programs expanded and new programs were approved (Table 2).
- Private dental assistant education programs offered throughout Alberta are required to show both graduation and employment outcomes above 70% to remain in operation in Alberta. Private programs have increased and expanded since 2017, demonstrating they are viable in Alberta.
- Post-graduation employment data are not available for all dental assistant education programs as many are private institutions. Indicative of the employment outcomes for students, NAIT reported 100% graduate employment for its Dental Assisting Programs in 2017/18, 2018/19, and 2019/20¹⁸.

3. Labour Market Demand for RDAs

A shortage of RDAs has been a long-standing issue in Alberta despite growth in this labour market.

- In interviews and in the Employer Survey, employers reported it has been a struggle to hire quality RDAs for at least five years in Alberta. Employers compete with one another for RDAs, sometimes resorting to poaching from other clinics. Because of the shortage of RDAs, employers are not able to consider qualifications or fit when hiring, leading to high turnover.
- Interviewees report the RDA shortage is present across the province but more pronounced in rural areas. This aligns with the Government of Canada's Job Bank assessment of "fair" job prospects for dental assistants across Alberta for the next year and "good" prospects in Wood Buffalo-Cold Lake Region in particular.¹⁹

Anticipated increase in number of retirements will impact the labour market.

- The proportion of the labour market approaching retirement age has increased from 12% to 17% from 2010 to 2019 as many in the Baby Boomer generation deferred retirement due to economic factors. A higher proportion of the labour market being of retirement age will result in a greater number of RDAs exiting the field than in previous years.

¹⁸ NAIT Graduate Employment Rates by Program Summary Cluster (April 2021)

¹⁹ <https://www.jobbank.gc.ca/marketreport/outlook-occupation/4475/AB>

A significant number of RDAs exit the labour market within 10-20 years of practice.

- Respondents to the Dental Assistant Survey reported they do not intend to practice as RDAs long-term. Many intend to move into administrative, sales, or treatment coordinator roles – or to leave the dental field entirely.
- Annual CADA Membership data show at least 3-5% of RDAs in Alberta are on a Leave of Absence at any time.
- A comparison of CADA Membership Leaves of Absence from 2017-19 and Reinstatements from 2018-2020 indicate 14% of those who take leaves do not return to practice.
- RDAs are predominantly female (99%) and most entering the profession are between 18 and 30 years of age (72%). Many RDAs take maternity leaves during this period; some returning to practice choose not to work full-time and some choose not to return to practice at all. Key stakeholders propose reasons for not returning to practice following maternity leave include high childcare costs in Alberta and the challenge of finding employment with sufficient schedule flexibility. Those who do return are often seeking more flexible schedules due to childcare concerns.
- With respect to the COVID-19 pandemic, we believe there will be further fallout for this group due to the inconsistent availability of education and childcare and required sick leaves due to isolation requirements throughout the last 18 months.
- In addition, significant numbers of young Albertans are leaving the province. For the first time in 40 years, Alberta no longer has the lowest median age in Canada²⁰, affecting the possible incoming labour market.

Impact of COVID-19 on RDA labour market

- The impacts of the COVID-19 pandemic on the labour market for RDAs remain to be seen; however, there are indications they have been significant. Interviewees and respondents to the Employer Survey report there has been a reduction in the RDA labour market due to early retirements, fear of contracting COVID-19, dental assistants being hired for COVID response, and reduced immigration due to travel restrictions. We anticipate a larger loss to the labour market than normal will be reflected in the labour data in the year to come.

²⁰<https://calgaryherald.com/opinion/columnists/varcoe-no-longer-the-youngest-albertas-brain-drain-sparks-concern>

There is a misalignment in RDAs current working conditions and expectations.

- Many RDAs are not working their preferred number of hours, position (full time, part time, or casual), or schedule (weekday, weekend, evening). See Tables 5-7.

There is a misalignment in the work expectations of RDAs and employers.

- While 57% of General Dentists reported in the Employer Survey that they work evenings, 75% of respondents to the Dental Assistant Survey reported that they would not work evenings. Similarly, while 42% of General Dentists work weekends, 88% of RDAs indicated they would not work weekends (Tables

There are differences in how generations view work impact the labour market.

- The generation now beginning to enter the labour market are considered to be “loyalty-lite” and have the confidence to find a job and employer that best fit their expectations around work flexibility and a pre-defined career trajectory.

4. Reflection on Labour Market Demand

Existing labour market modelling data do not appear to fully reflect the experiences of employers consulted for this labour market assessment. Labour market modelling data predict a shortage of RDAs in Alberta, but the extent of this shortage appears to be greater than forecast.

- Alberta’s Occupational Outlook 2019-2028 anticipated a shortage of only 64 RDAs in the province for 2022.
- The majority of Employer Survey respondents agree it is difficult to recruit RDAs (68%). Note: only 4% of respondents disagree recruitment is a challenge.
- Many respondents to the Employer Survey agree it is difficult to retain RDAs once they have been hired (20%).
- Interviewees and Employer Survey respondents report they receive few (if any) applications for open positions and that there is an even greater shortage of qualified candidates in the labour market.
- Most Employer Survey respondents agree there is a shortage of RDAs in the Alberta (83%); of these, 54% quality this as a “significant shortage.”

There is currently a high demand for RDAs in Alberta

- Many clinics are currently recruiting RDAs (53% of Employer Survey respondents) and 32% of respondents report that their clinics are currently understaffed in terms of RDAs.
- Interviewees and survey respondents report it is particularly difficult to hire RDAs to fill positions for a Leave of Absence in a reasonable timeframe.

RDA registration numbers do not reflect full-time employment and thereby obscure extent of current shortage

- Registration numbers do not reflect FTEs being worked and include:
 - **Part-time employment.** Dental Assistant survey respondents work part time (22%) or would prefer to work part time (27%). The 2019 CADA Membership Statistics Report also reports 46% of RDAs work fewer than 33 hours per week; 14% work 15 or fewer hours per week.
 - **Casual employment.** Interviewees observed some RDAs choose to work casually. This was the case for 1-2% of Dental Assistant survey respondents.
 - **Mixed job descriptions.** Many RDAs do not work primarily as dental assistants and fulfill other roles in clinics such as administration or sterilization. The 2019 CADA Membership Statistics Report found 7% of RDAs have a job description other than dental assistant (e.g., administration, educator, treatment coordinator, and sterilization). The Dental Assistant Survey asked about primary and secondary roles and found:
 - 45% of dental assistants have a secondary role in which they spend at least 40% of their time on a non-dental assistant role.
 - 12% of respondents work less than 40% of their time as a dental assistant.
 - **Out of province. According to the 2019 CADA Membership Statistics Report, 1% of registrants do not live in Alberta.**

Existing RDA registration numbers are inadequate to meet current labour market demand

- In our consultations with regulatory bodies and employers, the concept of an “ideal 1:2 ratio” of RDAs to dentists and dental specialists was raised repeatedly. Through interviews and the Employer Survey, it is evident that a 1:2 ratio is not necessarily “ideal”. Employer Survey respondents reported preferred ratios of 1:1 (11%), 1:2 (58%), 1:3 or more (31%).
 - Given these preferred ratios and the number of registered general dentists and dental specialists in Alberta in 2020 (Table 11: 2,864), the labour market would require a minimum of 6,301 full-time RDAs.
 - Given the most recent CADA registration numbers for 2021 (Table 4: 6,102), Alberta currently has a deficit of 200 full time RDAs.
- Taking into account available data on RDA work hours to estimate the required minimum number of RDAs results in an even greater deficit of RDAs.
 - Assuming the labour market requires a minimum of 6,301 full-time RDAs (based on the preferred ratios reported in the Employer Survey), given 46% of RDAs work

fewer than 33 hours per week (2019 CADA Membership Statistics Report), and assuming an FTE of 0.75²¹ for these dental assistants, an additional 725 full-time RDAs would be required to fill the labour market gap created by part-time employees.

- On the conservative side, if we assume 22% of RDAs work part-time (as reported by Dental Assistant Survey respondents), an additional 546 full-time RDAs would be required to fill the labour market gap created by part-time employees.
- Considering employer's preferred ratios and RDA's reported work hours, there is a current deficit in Alberta of 746- 925 full-time RDAs to fulfill the needs of the labour market. Note that this does not account for those general dentists and dental specialists working in excess of full-time hours and the additional RDA support required to facilitate these additional hours.

Given the above, we can only conclude that a significant shortage of RDAs has been building for some time in Alberta.

- The Alberta's Occupational Outlook 2019-2028 anticipated a shortage of only 64 RDAs in the province for 2022, however our research and consultations with key stakeholders lead us to estimate this number could currently be as high as 925 full-time RDAs. It must be noted that existing labour market modelling data have yet to reflect the impacts of the COVID-19 pandemic and "The Great Resignation" on the RDA labour market.
- The proposed increase in the number of available seats in dental assistant education programs in Alberta for 2022/23 (Table 2) will be insufficient to address the current need.

²¹ This is generous as 14% reported they work an FTE of 0.4 or less (2019 CADA Membership Statistics Report).

Dental Assisting Program

The proposed Dental Assisting program is easily developed and implemented with existing resources, infrastructure and equipment. Incremental operational costs are expected within the program in the future based on across-the board salary negotiations and will be funded primarily through tuition increases.

		Ongoing		
EXPENDITURES				
<i>Academic Salaries</i>				
	Professoriate (including benefits)	360,000		
	Faculty Service Officers (including benefits)	0		
	Administrative Professional Officers (including benefits)	0		
	Total Academic Costs	360,000		
<i>Service Teaching Costs</i>				
	Service Teaching Costs	0		
	Total Service Teaching Costs	0		
<i>Graduate Assistants</i>				
	Other Academic Staff (including benefits)	0		
	Total GA Costs	0		
<i>Non-Academic Salaries</i>				
	Support Staff 1.0 FTE Program Admin	80,000		
	Total Non-Academic Costs	80,000		
<i>Non-Salary Costs</i>				
	Non-Salary Costs (supplies, sundries, communications, etc.)	57,200		
	Total Non-Salary Costs	57,200		
<i>Other Operating Costs</i>				
	Mandatory Non-Instructional Fees Expenses - 52 F/T students at \$1,000	52,000		
	Faculty Overhead (student services, accounting and human resources)	29,832	\$ 497,200	6%
	Institutional Costs (space & facility costs, registrar, libraries, central IT, Finance, HR costs etc.)	149,160	\$ 497,200	30%
	Total Other Costs	230,992		
	Gross Operating Costs	728,192		
REVENUES				
	Tuition - 52 F/T domestic students (30 credits) \$18,250	949,000		
	Tuition - International students (No International Students will be admitted)	0		
	Mandatory Non-Instructional Fees - 52 F/T students at \$1,000	52,000		
	Equipment & Instrumentation Rental Fees - 52 FT at \$2,800	145,600		
	Other : Grants	0		
	Other: Endowment Proceeds	0		
	Campus Alberta Operating Grant	0		
		0		
	Total Revenues	1,146,600		
NET PROFIT/LOSS				
		418,408		



UNIVERSITY OF ALBERTA Library Impact Statement

As per [GFC Policy 37.3.7](#), Faculties seeking changes to existing programs must consider and seek the agreement to any impact of the proposed program changes on the library system and on course enrolments in other academic units. In addition, any new program proposal going forward for approval will require a service impact statement. Where the affected Faculties and/or Library are in agreement this statement will note that fact and details of the arrangement.

Please contact your [subject librarian](#) to solicit feedback on your program proposal and request a Library Impact Statement.

Library Contact:

Name: Lisa Tjosvold, Dagmara Chojecki Date: February 8, 2022
Library Unit: Health Sciences Email: tjosvold@ualberta.ca , chojecki@ualberta.ca

Program Proposal Contact:

Name: Carla Clarke Dept./School: School of Dentistry
Faculty: Faculty of Medicine & Dentistry E-mail: cclarke1@ualberta.ca

Proposed Program Changes:

<p>Proposed Dental Assisting Program</p> <p>The proposed Dental Assisting Program will be a full time 10-month program starting in August 2023. The program will be delivered using a hybrid model of onsite and online classes. The onsite classes will be located at the U of Alberta North Campus including the Simulation Lab in the Edmonton Clinic Health Academy, and the Oral Health Clinic (OHC) in the Kaye Edmonton Clinic. The program will consist of 5 sequential courses including: didactic (both asynchronous and synchronous delivery), simulation labs, pre-clinical labs, clinical sessions, clinical rotation in the OHC and an external practicum. Dental Assisting students will have assisting opportunities within the Undergraduate Dentistry Program, General Practice Residency program, Periodontology, Orthodontics, Oral Medicine Graduate Clinics and Implant Clinics. Clinical rotations will be planned and assigned throughout the program.</p>
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Library Service or Resource	Description of Library Impact
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<p>Instruction (e.g., classes with a librarian, tours, online resource guides, online tutorials, etc.)</p>	<p>Instruction related to library orientation may be useful for students in the Proposed Dental Assisting Program.</p> <p>The Library offers a range of workshops throughout the academic year to assist students with their research needs. In addition, online instructional guides and tutorials are accessible via the Library's web site to support the research process. Course/assignment specific instruction is also available via subject librarians. Lisa Tjosvold and Dagmara Chojecki are the subject librarians for Dentistry and have the capacity to support this Program/Certificate.</p>
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University of Alberta Library Impact Statement December, 2021

<p>Reference assistance (e.g., ongoing one-on-one help)</p>	<p>The subject librarian or other librarians in complementary subject areas will be able to accommodate requests for assistance via email, phone, or online.</p> <p>General reference assistance is available at all University of Alberta Library service desks and online via Ask us services.</p>
<p>Collections – course materials, print, electronic [note any impacts on simultaneous users, licensing considerations etc.]</p>	<p>The Library's current subscriptions to print and electronic journals and books should adequately support this program. Any items that are not available and/or accessible through the Library can be requested through Interlibrary Loan.</p> <p>Journals and resources with particular relevance to this program include: • The Dental Assistant</p> <p>Other subject specific databases and resources may be required.</p> <p>The Library also supports course reading list and reserve requests online using the Talis platform.</p> <p>The Library's Dentistry & Dental Hygiene Subject Guide will be relevant to students taking specific courses in the Program/Certificate/Course etc.</p>

Physical facilities (e.g., sufficient room for group work; in-library work, etc.)

Physical facilities are in place to support student research needs. There are bookable group [study spaces](#), as well as collaborative and individual study spaces in all library locations.

Other (specify)

- Proposal has an impact on the Library and can be supported.
- Proposal can be supported with additional resources; see attached details.
- Proposal has no impact on the Library.

<p>Unit Head Name</p>	<p>Unit Head Signature Date</p>
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Connie Winther	 8 February 2022
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Associate University Name	Associate University Signature Date
Sharon Murphy	8 February, 2022

University of Alberta Library Impact Statement December, 2021 2



**Governance Executive Summary
Action Item**

Agenda Title	University of Alberta Innovation Fund
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Motion

<p>THAT the Board Finance and Property Committee recommend that the Board of Governors:</p> <ul style="list-style-type: none"> a. subject to the approval of the Minister under section 77 of the Post-secondary Learning Act and approval of the Lieutenant Governor in Council under section 80 of the Financial Administration Act: <ul style="list-style-type: none"> i. authorize and approve the incorporation of a new corporation (FundCo), a wholly-owned subsidiary of the University of Alberta, including the governance model as is set forth in attachment 4 (Articles of Incorporation) and attachment 5 (By-Law No. 1); ii. authorize the Chair of the Board of Governors or the Chair of the Board Finance and Property Committee, on behalf of the Board as sole shareholder of FundCo, to execute all documents necessary to give effect to the resolutions of the Board of Governors of the University of Alberta pertaining to the establishment of FundCo, and to carry out or have carried out the execution of the organizational documents of FundCo; and b. make an application to the Minister of Advanced Education for the required approval.

Item

Action Requested	<input type="checkbox"/> Approval <input checked="" type="checkbox"/> Recommendation
Proposed by	Bill Flanagan, President and Vice-Chancellor
Presenter(s)	Bill Flanagan, President and Vice-Chancellor Sheetal Mehta Walsh, Senior Advisor to the President Barry Travers, Partner, KPMG

Details

Office of Administrative Responsibility	Office of the President and Vice-Chancellor
The Purpose of the Proposal is <i>(please be specific)</i>	This item is before the committee for approval of the proposed Innovation Fund.



Item No. 5

<p>Executive Summary (<i>outline the specific item – and remember your audience</i>)</p>	<p>Since January 2022, the university has been exploring the creation of an innovation investment fund to help drive the commercialization of innovations and intellectual property.</p> <p>The Innovation Fund will:</p> <ul style="list-style-type: none"> ● stimulate new ventures and spin-outs from the university and the Alberta ecosystem, ● create new jobs and attract investment to benefit the Alberta recovery plan and generate returns for the university, ● develop an investment policy to ensure deployment of donated funds are in support of the charitable purpose of the university, and ● enhance the reputation of the U of A as a center of excellence in entrepreneurship. <p>We will seek donor support for the fund through key alumni, corporations and matching government funds. Independent investment experts will manage the innovation fund in the same manner as a venture fund.</p> <p>As set out in the attached white paper, the University is seeking the Board of Governor’s approval to establish a new corporation (FundCo) that is a wholly-owned subsidiary of the University. The university will hold the funds directly and hire this corporation, with expertise in fund management, to manage the fund. The fund will be managed with a primary view to the successful commercialization of early stage ventures and returns to the university.</p> <p>A separate entity in the form of a corporation or partnership can be added to the structure arrangement in the future to facilitate the direct investment by third-parties investors to the investee entities invested in by FundCo.</p>
<p>Supplementary Notes and context</p>	<p><i><This section is for use by University Governance only to outline governance process.></i></p>

Engagement and Routing (Include meeting dates)

<p>Consultation and Stakeholder Participation (parties who have seen the proposal and in what capacity)</p> <p><For information on the protocol see the Governance Resources section Student Participation Protocol></p>	<p><u>Those who are actively participating:</u></p> <ul style="list-style-type: none"> ● Bill Flanagan, President & Vice-Chancellor ● Aminah Robinson Fayek, Vice-President (Research and Innovation) ● Catherine Swindlehurst, Chief Strategy Officer ● Brad Hamdon, General Counsel & University Secretary <hr/> <p><u>Those who have been consulted:</u></p> <ul style="list-style-type: none"> ● Todd Gilchrist, Vice-President (University Services and Finance) ● Kelly Spencer, Associate Vice-President (Development) ● Alexis Ksiazkiewicz, Associate Vice-President (Government and Community Relations) ● Darin McKinley, Senior Legal Counsel ● Ronald Ritter, Director, Treasury and Investment ● Martin Coutts, Associate Vice-President (Finance, Procurement and Planning)
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Item No. 5

	<ul style="list-style-type: none"> • Board Finance and Property Committee on April 26, 2022 • Board of Governors on May 13, 2022 • Deans' Council on May 18, 2022 • PEC-O May 24, 2022 • Board Learning, Research and Student Experience Committee - June 7, 2022
Approval Route (Governance) (including meeting dates)	<p><i><u>Those who have been informed:</u></i></p> <ul style="list-style-type: none"> • <p>Board Finance and Property Committee - May 31, 2022 (recommendation) Board of Governors - June 17, 2022 (approval)</p>

Strategic Alignment

Alignment with <i>For the Public Good</i>	Please note the Institutional Strategic Plan objective(s)/strategies the proposal supports.			
Alignment with Core Risk Area	<p>Please note below the specific institutional risk(s) this proposal is addressing.</p> <table border="0"> <tr> <td> <input type="checkbox"/> Enrolment Management <input type="checkbox"/> Faculty and Staff <input type="checkbox"/> Funding and Resource Management <input type="checkbox"/> IT Services, Software and Hardware <input checked="" type="checkbox"/> Leadership and Change <input type="checkbox"/> Physical Infrastructure </td> <td> <input type="checkbox"/> Relationship with Stakeholders <input checked="" type="checkbox"/> Reputation <input checked="" type="checkbox"/> Research Enterprise <input type="checkbox"/> Safety <input type="checkbox"/> Student Success </td> </tr> </table>		<input type="checkbox"/> Enrolment Management <input type="checkbox"/> Faculty and Staff <input type="checkbox"/> Funding and Resource Management <input type="checkbox"/> IT Services, Software and Hardware <input checked="" type="checkbox"/> Leadership and Change <input type="checkbox"/> Physical Infrastructure	<input type="checkbox"/> Relationship with Stakeholders <input checked="" type="checkbox"/> Reputation <input checked="" type="checkbox"/> Research Enterprise <input type="checkbox"/> Safety <input type="checkbox"/> Student Success
<input type="checkbox"/> Enrolment Management <input type="checkbox"/> Faculty and Staff <input type="checkbox"/> Funding and Resource Management <input type="checkbox"/> IT Services, Software and Hardware <input checked="" type="checkbox"/> Leadership and Change <input type="checkbox"/> Physical Infrastructure	<input type="checkbox"/> Relationship with Stakeholders <input checked="" type="checkbox"/> Reputation <input checked="" type="checkbox"/> Research Enterprise <input type="checkbox"/> Safety <input type="checkbox"/> Student Success			
Legislative Compliance and jurisdiction	BFPC Terms of Reference			

Attachments:

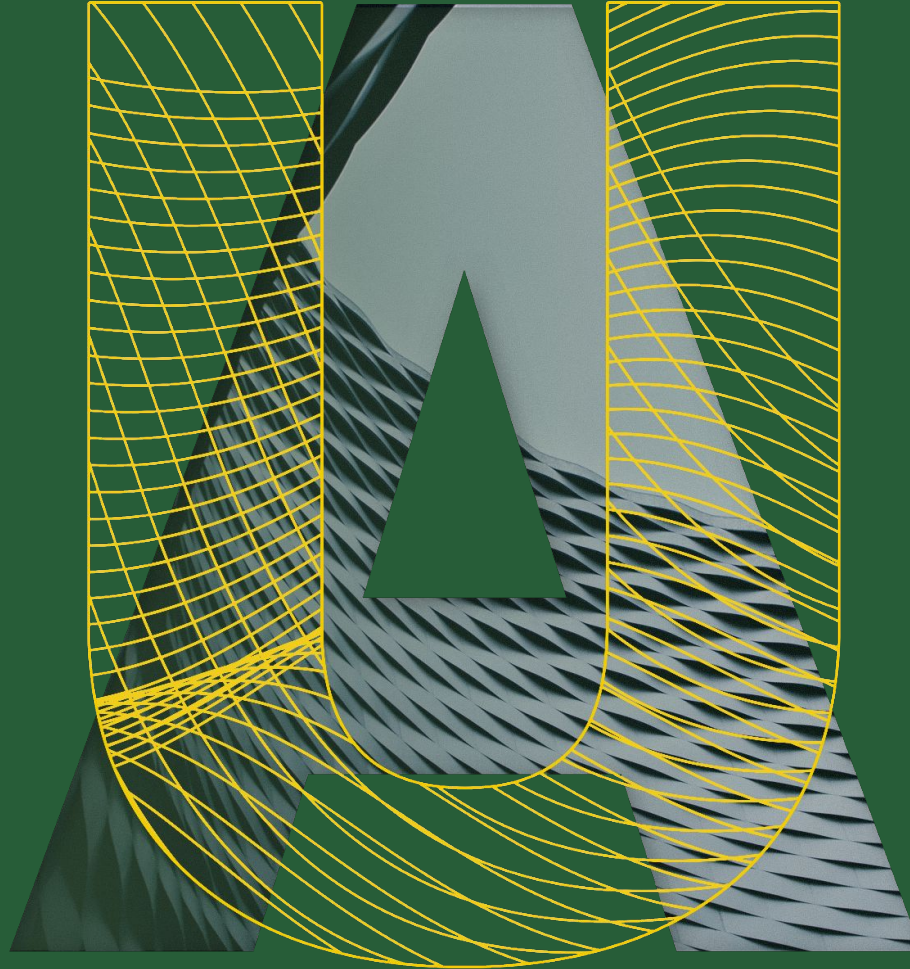
1. Innovation Fund Slide Deck (19 pages)
2. Draft Innovation Prospectus (7 pages)
3. Innovation Fund White Paper (15 pages)
4. Articles of Incorporation (6 pages)
5. By-laws (10 pages)

Prepared by: Sheetal Mehta Walsh, Senior Advisor to the President, smmehta@ualberta.ca

Innovation Fund

Investing in
Alberta's Future

MAY
2022



Leading
with purpose.

Humanity faces challenges like never before: climatic, social and economic



The U of A is uniquely positioned to tackle these challenges and seize opportunities

Maximizing real-world impact for the public good

1. Harnessing research
2. Discovery
3. Expertise and innovation

Our Global Impact

The U of A is an innovation leader

- **One of Canada's top five** research-intensive universities
- **3rd in the world** for artificial intelligence for over 25 years

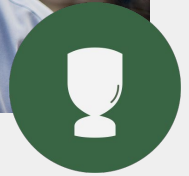
Global rankings

Among the very best in the world in STEM and the health sciences – core areas of innovation – including:

- **(9th)** Petroleum engineering
- **(11th)** Mining and minerals engineering
- **(14th)** Nursing

Leading with purpose

Attachment 1



2020 Nobel Prize

Michael Houghton, Director of the Li Ka Shing Applied Virology Institute at the U of A, was awarded the 2020 Nobel Prize in Medicine for his role in the discovery and treatment of the Hepatitis C Virus, a breakthrough that has saved countless lives worldwide.

World's top 100

- **(62nd)**
Pharmacy and pharmacology
- **(81st)**
Chemistry
- **(86th)**
Agriculture and forestry

Funding the Future

The Fund will advance innovation to tackle global challenges



Address the need for:

1. Access to capital early on
2. Investment to scale
3. **Transformative innovation** across sectors

Building the Alberta of tomorrow

Innovation Fund goals

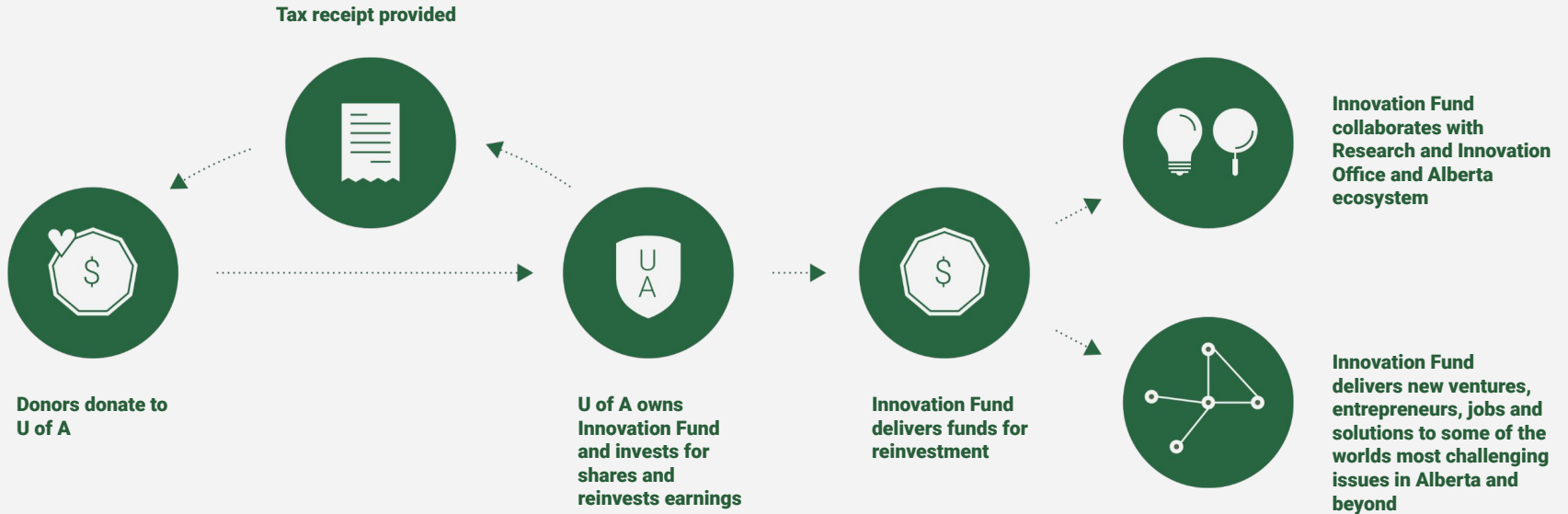
- **Stronger position:** Be a strategic driver of social and economic growth
- **Advance the ecosystem:** Stimulate innovation for the public good
- **Global impact:** Transform research into real-world solutions

Fund Structure

A subsidiary of the
University with its
own governance



Operational Model



Founder Friendly Labs (FFL)

Leveraging FFL startup accelerator and fund management

- Deal sourcing
- Founder Friendly lens
- Online tools and resources
- Access to networks and deal-making
- Other non-monetary supports
- Providing access to mentors and networks

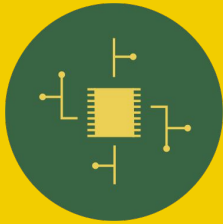
Ecosystem Collaborator

CEO/Investment Committee manages fund activities, including:

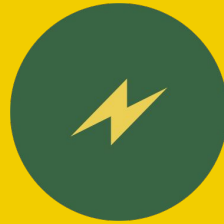
- White space opportunity mapping
- Providing de-risked deal flow
- Collaboration with Alberta stakeholders
- Championing wins globally
- Podcast series
- Economic and social impact reporting

Areas of Focus

Fostering U of A's areas of research excellence and provincial economic priorities



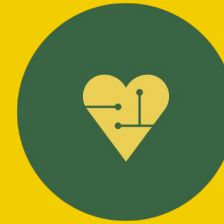
Emerging
and enabling
technologies



Energy



Agriculture



Life sciences
and health tech



Glycomics

Alberta Economic Development

- Jobs, talent development and attraction
- Scaling of global companies
- Revenue to the province
- Strategic global partnerships
- Investment attraction
- Global reputation
- Economic and Social Reporting (including ESG, SDGs, DEI, SROI)

Fund-ready Ventures

We are conducting due diligence on our pipeline of several diverse spin outs and new ventures



Past Investment Successes



Leadership Experience

Corporate and Government

1. Chief Strategy Officer, Ministry for Jobs, Economy and Innovation, Gov't of Alberta
2. Director, created and implemented Global VC Relations for Bill Gates @MSFT
3. Deal Maker, UK Government's Global Entrepreneur Programme - raised 1 billion GBP and mentored 900 global companies, taught master classes in entrepreneurship and pitching for funding
4. WestLB Investment Bank, UAE and GCC Region



Sheetal Mehta Walsh Attachment 1
Senior Advisor to the President
 25+ years experience in technology, vc and innovation

Founder



Angel Investor



Corporate and Government



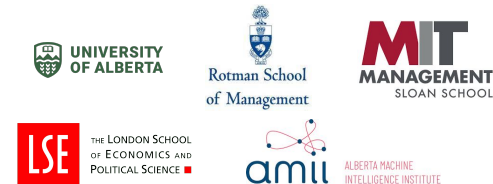
Board Member



Keynote Speaker



Education



Innovation Fund Advisors



Dr. Rohit Sharma

- Partner with True Ventures in Silicon Valley
- Angel investor in early-stage technology since 2000s
- Founded ONI systems (acquired by Ciena, 2002)
- Volunteered with Stanford University's design school, serving as a project judge for innovative projects
- Past Director of Alberta Innovates Bio Solutions



Ms. Susan Anderson

- President and CEO of Cannonball Capital
- Co-founder of DirectCash Payments and Bitvo
- Fellow of Creative Destruction Lab, founding board member and chair of Endeavor Canada
- Served on the Government of Alberta's Innovation Capital Working Fund and received the U of A alumni award in 2010



Mr. Alfred Sorensen

- Founder and CEO of Pieridae Energy
- Co-founder of Galveston LNG
- Extensive experience in challenging regulatory environments, negotiating and securing finance
- Former mentor of the UAlberta ThresholdImpact Venture Mentoring Service

Innovation Fund Advisors



Dr. Doug Goss

- Practices general/corporate law with Bryan and Company LLP
- Appointed Queen's Counsel in 1999
- Assisted multiple startups with multi-million dollar domestic and international transactions
- Chaired many boards and foundations
- Serves as corporate secretary and general counsel for several biotech companies



Dr. Ray Muzyka

- Co-founder of BioWare
- Angel investor and founding chair of the UAlberta ThresholdImpact Venture Mentoring Service
- Invests in sustainable for-profit entrepreneurship and social goals
- Mentor/fellow at Creative Destruction Lab
- Served two terms on the U of A Board of Governors



Dick Wilson

- Experienced corporate litigator with corporate, partnership and IP dispute experience
- Founding member and past mentor of the ThresholdImpact Venture Mentoring Service and has experience in providing support to alumni entrepreneurs
- Has served on the Board of Governors, the Senate and Alumni Council

Pathway to Progress

June 2022	Approvals from the Board of the University
TBD	Approval of Government of Alberta (to set up Fund entity)
In Progress	IP commercialization strategy review
	Building online tools and resources for success
	Fundraising
Fall 2022	Announcement by President Flanagan
	Start investing in new ventures



THANK YOU

THE
END

Invest in the future of the University of
Alberta, our province and beyond

Contact smmehta@ualberta.ca



Innovation Fund

An Investment in Alberta's Future

April 2022

- DRAFT -



University of Alberta Innovation Fund

Humanity faces an array of challenges like never before: climatic, social and economic. The University of Alberta is uniquely positioned to tackle these challenges.

The U of A is one of Canada's top five research-intensive universities, with over \$500 million in research every year and more than 55,000 students, faculty and staff. We rank among the very best in the world in STEM and the health sciences — core areas of innovation — including petroleum engineering (ninth in the world, Centre for World University rankings 2021-22), mining and minerals engineering (11th), nursing (14th), anatomy and physiology (34th), geophysics (41st), earth and marine sciences (42nd) and geology (45th).

Within the world's top 100, other areas of key strength include pharmacy and pharmacology (62nd), chemistry (81st), agriculture and forestry (86th), medicine (92nd) and chemical engineering (97th). Michael Houghton, director of the Li Ka Shing Applied Virology Institute at the U of A, was awarded the 2020 Nobel Prize in Medicine for his role in the discovery and treatment of hepatitis C, a breakthrough that has saved countless lives around the world. The U of A has ranked third in the world for artificial intelligence for over 25 years.

Extraordinary, world-changing ideas are not new to the U of A. With our research strength, we have the opportunity to lead Canadian universities in translating ideas into economic, environmental and social benefits. An innovation fund will foster commercialization of intellectual property and spin-out companies, which benefit the Alberta ecosystem. Our collaborative approach will create economic growth, innovation, entrepreneurs, jobs and revenue that will strategically position the U of A globally.

Opportunity

There are major hurdles in advancing innovation outside of universities — one of which is the lack of access to smart capital early on. The University of Alberta Innovation Fund will address this gap by strategically investing risk capital in new and innovative start-ups founded by U of A students, recent alumni, faculty, staff and the wider Alberta ecosystem. By nurturing start-ups early on, the fund will serve as a critical bridge to accessing additional outside investment capital for de-risked ventures to scale.

The fund will unlock the potential of new ventures to progress from concept to reality, creating high-value job opportunities for and building Alberta's economy of tomorrow.

Through the fund, the U of A will promote a culture of innovation and entrepreneurship across the university, ensuring that U of A will be an even stronger driver of economic growth, talent development and creativity in our province and beyond. In line with provincial economic priorities and our areas of research excellence, we will invest in:



Emerging and enabling technologies

leveraging machine learning and artificial intelligence (edtech, fintech, health tech, agtech, cybersecurity, infrastructure, marketplaces, enterprise)



Life sciences and health tech (biotechnology, pharmacy, natural health products, virology, vaccines and therapeutics, digital health, disease prevention, mental health)



Agriculture (genomics, carbon sequestration and measurement of carbon in soils, collision pieces including drones, environmentally contained agriculture, agriculture data analysis, logistics, agri-food diversification, land/water/energy efficiency, etc.)



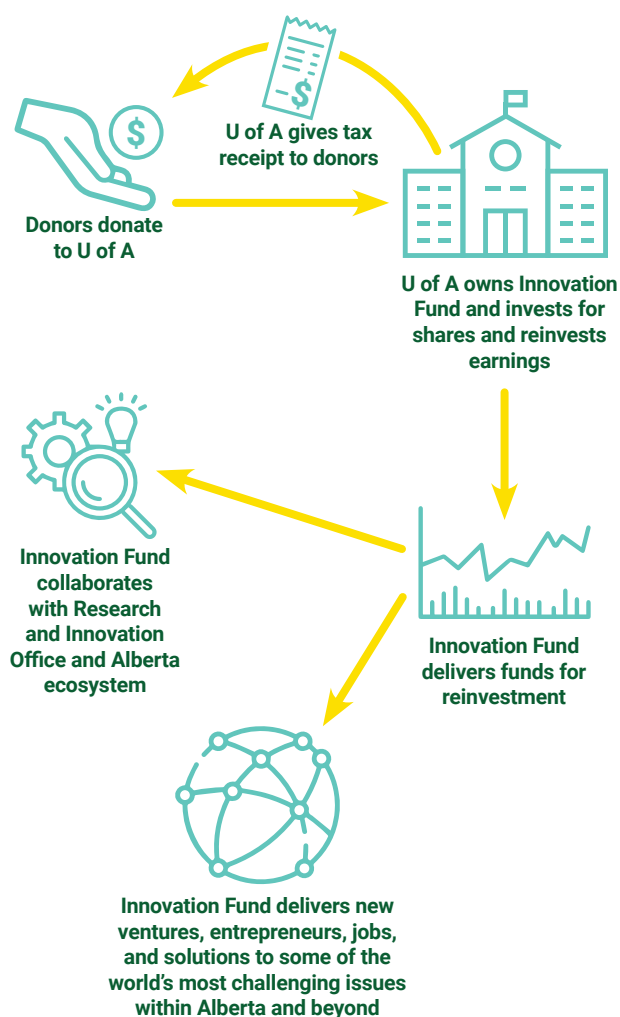
Energy (hydrogen, carbon capture/ utilization/storage, greenhouse gas-abated fossil fuels, renewable minerals and metals, solar manufacturing, biomass, waste and nuclear, electric vehicles)

Innovation Fund

As a separate for-profit corporation, the Innovation Fund will be wholly owned by the U of A and governed by a board of directors that will oversee the fund's activities and monitor outcomes. The CEO, an experienced global entrepreneur, investor and advisor, will report directly to the board of directors.

- The initial fund target is \$50 million. We will seek donations from key alumni and supporters, including a new angel network driven by the Alberta School of Business, and corporate innovation donations. We will also approach the provincial government to seek matching contributions.
- Through an online innovation portal, donors can donate directly to the university and receive charitable tax receipts.
- The university will invest these donations in the fund in return for shares. The CEO and investment committee will lead and manage activities related to the fund, and position founders to scale their ventures.
- All returns from investments made in ventures will be returned to the innovation fund for re-investment into a future generation of start-ups. As the fund grows, there may also be opportunities to provide dividends back to the university.
- The CEO and Investment Committee will manage all fund activities, including:
 - Deal sourcing in collaboration with the Office of the Vice-President (Research and Innovation) and ThresholdImpact Venture Mentoring Service
 - Deep dive due diligence with a founder-friendly lens
 - Creating online tools and resources for entrepreneurs to learn, access resources and engage (open data library, corporate partnerships, service providers, ESG, DEI, and neurodiversity guidance)
 - Other non-monetary supports such as teaching releases and dedicated access to labs so that researchers can advance the commercialization of their innovations
 - Student participation across all faculties
 - First-in, smart and direct investments into new ventures (board seat)
 - Providing access to mentors and networks in the Alberta ecosystem and abroad

- White space opportunity mapping across the university and deal-making for effective go-to-market implementations that advance Alberta's diversification
- Championing wins globally
- Economic impact reporting (jobs, economy and innovation)
- Providing de-risked deal flow to the Alberta ecosystem of investors, accelerators and corporations



U of A Spin-off Success Stories

These companies have demonstrated commercial viability and are wins for the University and the Province.



Sheetal Mehta Walsh
Senior Advisor, President's Office University of Alberta

Highlights:

- Angel Investor and Board Member (Cybersecurity, VR, Tech: Financial, Education, E-Commerce, Climate, Retail, Tech4Good - London, San Francisco, Edmonton)
- Board Member Innovate Edmonton, UCD Michael Smurfit Graduate Business School, Ireland
- Chief Strategy Officer, Ministry Jobs, Economy and Innovation, Government of Alberta
- Deal Maker, Global Entrepreneur Program, British Government (raised 1 billion GBP and mentored 900 global companies, taught master classes in entrepreneurship and pitching)
- Founder Soho Ventures Fund (UK's first all-female fund), Advisor Ignite Fund (climate tech)
- Founder Shanti Life (financial inclusion and social enterprise microfinance fund for start-ups)
- Director, created and implemented the VC Relations Global program for Bill Gates and Dan'l Lewin at Microsoft, Silicon Valley, EMEA
- WestLB Investment Bank, United Arab Emirates
- Two TEDx Talks covering entrepreneurship, access to capital and social innovation
- Guest lecturer at Stanford, Haas Berkeley, London School of Economics, University College Dublin Smurfit Graduate Business School, University of Alberta, Doha Forum, House of Lords

Education:

- Rotman School of Management ICD DEP (2022 current): Directors Education Program
- MIT Sloan School of Management (2021): Artificial Intelligence: Implications for Business Strategy
- Alberta Machine Intelligence Institute (2021): Machine Learning Foundations 1 & 2 Business Focus
- University of Alberta (2021): Indigenous Canada
- London School of Economics and Political Science (1995): MSc. Economics, International Relations
- University of Alberta (1994): B.A. Political Science

Awards

- Awarded by Prince Charles and Cherie Blair - Asian Women of Achievement: for implementing innovative technologies in developing countries
- Awarded by Her Majesty, The Queen - "Women in Business Awards," Buckingham Palace
- Alumni Award of Excellence from the University of Alberta
- Microsoft Alumni Integral Awards for creating models of innovation in vulnerable communities

Join us on this journey to invest in the future of the University of Alberta, our Province and beyond. For more information contact smmehta@ualberta.ca

BIO TEXT AND PHOTOS PENDING REVIEW AND APPROVAL FROM ADVISORS

Ms. Susan Anderson (LLB 1988) is president and CEO of Cannonball Capital, which invests in venture companies, private and public equities, and commercial real estate.

Susan is a serial entrepreneur who co-founded DirectCash Payments in 1998. The company became the second largest ATM company in the world before it was acquired by Cardtronics in 2017. She is also co-founder of Bitvo, a leading Canadian crypto currency exchange platform in Canada.



Fellow of the Creative Destruction Lab (CDL) in Calgary and Vancouver where she provides mentorship and financing aid to early stage companies. Advisor to the University of Calgary's UCeed program which supports startups during transition between innovation, demonstration and commercialization.

Susan is the founding board member and chair of Endeavour Canada, a non-profit stimulating entrepreneurial activity through mentorship for business founders based in emerging markets.

Susan served on the Government of Alberta's Innovation Capital Working Group which advised on incentivizing capital investment in Alberta's tech and innovation ecosystems.

Susan received a U of A Alumni Honour Award in 2010.

Dr. Doug Goss (BCom 1981, LLB 1984, LLD (Hon) 2017) has earned a reputation as one of Edmonton's preeminent business leaders.

Doug practices general corporate/commercial law with Bryan & Company LLP and was appointed Queen's Counsel in 1999. He has been recognized as one of the best lawyers in Canada in securities law since 2010.



He has a wide range of experience—from assisting start-up companies with all facets of their business, to advising on multimillion-dollar domestic and international transactions.

Doug serves as corporate secretary and general counsel for several biotech companies developing innovative treatment solutions.

Doug is chair of Hockey Canada Foundation and past chair of the NAIT Board of Governors, Edmonton Oilers Community Foundation, and TELUS Edmonton Community Board.

Doug is past chair of the U of A's Board of Governors and was awarded an honorary doctorate of laws in 2017.

Dr. Ray Muzyka (BMedSc 1990, MD 1992) is an angel investor and founding chair of the UAlberta ThresholdImpact Venture Mentoring Service.



Through his firm, Ray invests in sustainable, for-profit entrepreneurship, and social goals, seeking returns on business profit and social returns to the world.

After completing his MD at the U of A, Ray co-founded videogame company BioWare which was Alberta's fastest growing tech company before it was sold to Electronic Arts in 2008.

Ray is a mentor and fellow at the Creative Destruction Lab (CDL) West, Rockies and Toronto, is a CDL-Global Founding Partner.

Ray served two terms on the U of A Board of Governors and is past chair of the Alberta Research and Innovation Advisory Committee.

Ray received the inaugural Alumni Innovation Award in 2015 and was inducted into the Order of Canada in 2018 for his contributions to startup and entrepreneurial communities across Canada.

Dr. Rohit Sharma (MSc 1991, PhD ElecE 1996) is a partner with True Ventures in Silicon Valley.



Rohit has been an angel investor in early-stage technology companies across virtualization, mobile, and machine learning technologies since the early 2000s.

Rohit founded ONI Systems and pioneered the use of optical switching and real-time signal processing technologies which have gone on to significantly improve the reliability and speed of voice, data and video connections. The company was acquired by Ciena in 2002.

Rohit has volunteered with Stanford University's design school, serving as project judge for students building innovative projects.

He is a past director of Alberta Innovates-Bio Solutions and was awarded the Alumni Horizon Award 2013.

Mr. Alfred Sorensen (BCom 1983) is founder and CEO of Pieridae Energy. His career as an energy sector entrepreneur has been focused on novel ways to capitalize on Canada's liquified natural gas (LNG) export potential.



Alfred co-founded Galveston LNG in 2003, laying the groundwork for Canada's first LNG terminal in Kitimat, BC. The company was sold in 2010 to Houston Apache Corporation and EOG Resources Canada.

Alfred has extensive experience working in a challenging regulatory environment, negotiating, and securing financing from a multitude of government and corporate sources.

He is a former mentor of UAlberta's ThresholdImpact Venture Mentoring Service where he provided support and coaching to entrepreneurs as they worked to launch their innovations.

Was awarded the Alumni Honour Award in 2011 for his contributions to the business community in Alberta and served as the Alberta School of Business' Distinguished Executive-in-Residence.

**UNIVERSITY OF ALBERTA
INNOVATION FUND
WHITE PAPER**

May 24, 2022

The purpose of this Briefing Note is to outline, from a transaction perspective, the governing and legal documents required to establish the University of Alberta Innovation Fund (the “**Fund**”) via a corporate structure with the underlying investments being beneficially owned by the University of Alberta (the “**U of A**” or the “**University**”).

Also provided in this correspondence are further analyses on the tax considerations of the ongoing operation of the Fund including the impact of the Fund activity on the charitable status of the University.

Unless otherwise noted, all statutory references herein are to the *Income Tax Act* (Canada) (the “**ITA**”).¹

Table of Contents:

1. Purpose of the Fund
2. Facts & Assumptions
3. Transaction Overview Steps
 1. Incorporation of FundCo.
 2. The U of A will subscribe 100% common shares of the FundCo.
 3. The U of A will transfer working capital to the FundCo in exchange for a Promissory Note or Share Capital.
 4. The U of A and the FundCo will enter into a Service Provider Agreement to provide the FundCo the access to the University’s certain administrative and human resources, to be negotiated with VP(USF).
 5. The U of A will prepare a Gifting Agreement for the purpose of accepting donations to be directed to the Fund and managed by FundCo.
 6. The U of A will prepare a document which will serve as the Terms of Reference (“**ToR**”) outlining the setup and ongoing operation of the Fund.
4. Key Implementing Agreements
 - Agreements required to create and govern FundCo
 - FundCo Articles and By-Laws
 - Approval documents for FundCo for the GoA
 - Donor Gift Agreement
 - Service Provider Agreement for FundCo to act on behalf of U of A
 - Management Services Agreement

¹ R.S.C. 1985, c.1. (5th Supp.), as amended to the date hereof.

**UNIVERSITY OF ALBERTA
INNOVATION FUND
WHITE PAPER**

May 24, 2022

- Investment Guidelines
 - Investment Evaluation Analysis
5. Income Tax Considerations
 - A. Outline of FundCo activities and reporting
 - B. Charitable status
 - C. Research activities
 6. FundCo Reporting Issues
 7. Intellectual Property Policy Issues
 8. FundCo Annual Operating Budget
 9. Accounting Analysis and Financial Reporting Considerations

PURPOSE OF THE FUND

The purpose of the University of Alberta’s Innovation Fund will be to strategically invest donor funding in innovative start-ups founded by U of A students, recent alumni, faculty, staff and the wider Alberta ecosystem. The Innovation Fund will stimulate new ventures and spin-outs from the university and the Alberta ecosystem and enhance the reputation of the U of A as a center of excellence in commercialization and entrepreneurship.

Addressing the lack of access to smart capital for new ventures, the Fund will provide investment capital for de-risked ventures to support the scale up of early-stage operations. The Fund will create new jobs and attract investment to benefit the Alberta recovery plan and generate returns for the university.

FACTS AND ASSUMPTIONS

The information outlined herein is based on the following facts and assumptions:

1. The U of A is a registered charity as defined in subsection 248(1) and is a qualified donee under subsection 149.1(1) of the ITA.
2. The U of A was chartered through the *University Act* and continued under section 125.2 of the *Alberta Post-Secondary Learning Act* (“**APSLA**”).²
3. The U of A governs itself with a bi-cameral governance structure enabled through the APSLA. The Board of Governors has authority for managing and operating the U of A with its mandate

² Statutes of Alberta, 2003. Chapter P-19.5 (current as of February 1, 2022).

**UNIVERSITY OF ALBERTA
INNOVATION FUND
WHITE PAPER**

May 24, 2022

and general powers of duties as provided in section 60 of the APSLA. Subject to the overarching authority of the Board of Governors, the General Faculties Council has authority for academic governance.

4. The U of A is a “public post-secondary institution” as defined in the APSLA and is a leading public research university in Canada. It is a member of the U15 Group of Canadian Research Universities and the Worldwide Universities Network.
5. The Fund investment assets will be beneficially owned by the University and managed by a newly incorporated entity (the “**FundCo**”) that will be wholly owned by the U of A.

The following is background information related to the proposed objectives, model and management of the Fund:

1. Through the creation of the Fund, the U of A will leverage research and talent to stimulate further commercialization and spin-out ventures with a focus on entrepreneurship, education and social innovation. Through the Fund, the U of A will more efficiently deliver on its core mission, and become a stronger driver of economic growth, talent development, innovation and creativity in the Province of Alberta (“**Alberta**”) and beyond.
2. The Fund will invest in new and innovative start-ups founded by the broader community in Alberta. It will include U of A students, recent alumni, faculty and staff as well as innovative new ventures from across the Province of Alberta (collectively hereinafter referred to as the “**Founders**”) that meet the investment criteria to be established by the Fund.
3. The Fund will support innovations whose objective is to provide solutions to critical social, economic and environmental challenges. Special attention will be paid to the following sectors: Emerging and Enabling Technologies; Life Sciences and Health Tech; Agriculture and Energy.
4. The proposed Ecosystem of the Fund is presented in the Innovation Fund Deck.
5. All future returns from investments made in ventures will either be returned to the Fund for re-investment into a future generation of innovations or invested in advancing the teaching and research mission of the U of A.
6. The initial Fund target is \$50 million, consisting of donations made to the University from key alumni, the U of A Angel Academe, corporate innovation funds, and matching funding from Government.
7. The University will provide investment into the Fund to provide initial working capital in connection with administration and operation costs incurred by the Fund, including salaries and management fees, which will subsequently be covered by the philanthropic funding raised.

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6. The Fund will promote co-investment and follow-on funding directly into the new ventures from other investors both within the Alberta ecosystem and abroad, enabling the ventures to scale and tackle global solutions.
7. The University's Board of Governors will appoint the Board of Directors of the FundCo entity.
8. The appointed Board of Directors will oversee the Fund's activities and monitor outcomes and successes with direct reporting from the Fund CEO.

TRANSACTION OVERVIEW STEPS

A. Description of Transaction Events – Phase I

The following events are expected to occur in the course of setting up the Fund:

1. Approval process to establish a wholly-owned subsidiary of the U of A with the Government of Alberta ("GoA").
2. Incorporate the FundCo (also referred to herein as the "Service Provider").
3. The U of A will subscribe for 100% of the common shares of FundCo at a nominal amount.
4. FundCo will require an initial amount of working capital to commence its operations. The amount will be determined with the development of the initial budget of FundCo, but for purposes of illustration, we would anticipate that an initial working capital amount of at least \$500,000 will be required.
5. The U of A will transfer initial working capital to FundCo in exchange for a Promissory Note of FundCo at a prescribed interest rate.
6. The U of A and the FundCo will enter into a Management Services Agreement to allow FundCo to access University administrative and human resources services for a reasonable fee.
7. The U of A and FundCo will enter into a Service Provider Agreement to allow FundCo to perform its investment management activity related to the Funds for the University. FundCo will charge the University an investment management fee based on a formula of funds under management that is designed to create sufficient income for FundCo to cover its operating costs.
8. It is anticipated that FundCo will earn a sufficient management fee to repay the U of A the promissory note created through funds lent on startup.
9. The U of A will prepare a Donor Gifting Agreement for the purpose of accepting donations to be directed to the Fund. The Donor Agreement will outline how the donation will be allocated to

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Innovation Fund investments, as well as a small percentage overhead fee to cover FundCo's investment management fee.

10. The U of A will prepare a document which will serve as the Terms of Reference ("ToR") outlining the setup and ongoing objectives and operations of the Fund and FundCo.

B. Description of Transaction Events – Phase II

11. As part of Phase II, consideration will be given to establishing a second legal entity ("InvestCo") that will be designed to allow investors to contribute funds that will be used to invest in entities that FundCo is also managing investments for the Fund. This will enable the overall Fund to grow and provide investors with the opportunity to subscribe for an equity investment in InvestCo.
12. Additional due diligence is required to ensure that the donor/investor community seeks such an option.
13. Complexities also exist to ensure that InvestCo can rely on some form of exemption from filing a Securities Prospectus pursuant to raising capital in this manner under the *Alberta Securities Act*.
14. The schematic below outlines the arrangement under Phase II as a possible expansion of the Fund structure. It is anticipated that InvestCo could either take the legal form of a Corporation or Limited Partnership, depending on the interest of the donor community.
15. As the project proceeds, further details on the optimal manner to create and operate InvestCo under Phase II will be developed.

C. Description of Transaction Documents

The following represent the key implementing documents and Agreements that will be developed in order to establish and operate Phase I of the Fund and oversee the FundCo goals and objectives. Within this section, an outline of the relevant background purpose of each document is provided.

KEY IMPLEMENTING DOCUMENTS AND AGREEMENTS

The following represent the key documents that are being developed that will support the establishment, governance and operations for Phase I of the Fund.

1. Approval documents for FundCo for the GoA

The appropriate resolutions to support the request and approval from the GoA in order to establish and operate FundCo in the manner described herein as part of Phase I.

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2. Agreements required to create and govern FundCo

Approval from the University's Board of Governors with the required details to incorporate and govern FundCo.

3. FundCo Articles and By-Laws

The creation of the Articles and By-laws for FundCo that will describe the operating objectives and powers of FundCo along with the governing principles of the Board of Directors.

4. FundCo Operating Budget

An Operating Budget will be developed to ensure that FundCo has the initial start-up funding required to hire the appropriate personnel to manage the Fund and establish the necessary infrastructure to operate. The ongoing funding of FundCo's operations will be supported by the investment management fee, which will be charged as overhead to donations made to the University in support of the Fund. The initial start-up investment provided by the U of A will be replenished with donated funds according to a negotiated timeline.

5. Fund and FundCo Terms of Reference

An overall 'Terms of Reference' document is being drafted to articulate the working relationship for both the Fund, which will be beneficially owned by the U of A, and FundCo, which will manage the investments within the Fund in their role as fund manager for the U of A. The explicit operating and reporting requirements of FundCo will be outlined within this document.

6. Donor Gifting Agreement

A Master Donor Gifting Agreement will be developed, which will enable donors to provide direction to the University on the use of their donations for the Fund. The Agreement will make explicit that the gift is in support of the agreed direction and charitable purpose of the University.

7. Service Provider Agreement for FundCo to act on behalf of U of A (including basis of Investment Management Fee)

The Service Provider Agreement will outline the key principles from FundCo's Terms of Reference and establish the investment guidelines and fee arrangements, which will allow FundCo to act as

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a fund manager for the U of A to administer the investment activity of the Fund. The Agreement will outline the reporting responsibility of fund management activities by FundCo to the University.

8. Management Services Agreement with the U of A

FundCo and the U of A will enter into a Management Services Agreement, which will allow the University to provide back-office support services to FundCo to ensure that the costs of FundCo are efficiently managed. FundCo will pay a management services fee to the University to secure these management services.

9. Fund Investment Guidelines

The Service Provider Agreement will include Fund Investment Guidelines to ensure that FundCo is evaluating and directing investments to specific investment categories that support the charitable purpose of the University and can be described as social purpose investing. The initial Fund Investment Guidelines will include support and direction in the following categories:

1. Emerging and enabling technologies: leveraging machine learning, artificial intelligence, virtual and augmented reality
 - Education technology
 - Financial services technology
 - Cybersecurity
 - Blockchain
 - Digitization and NFTs (non-fungible tokens for Art commercialization)
 - Infrastructure
 - Marketplaces
 - Enterprize
 - Mechatronics/robotics

2. Energy:
 - Hydrogen
 - Carbon capture
 - Utilization/storage
 - Greenhouse gas-abated fossil fuels
 - Renewable minerals and metals
 - Solar manufacturing
 - Biomass
 - Waste and nuclear

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- Electric vehicles
3. Agriculture:
- Genomics
 - Carbon sequestration and measurement of carbon in soils
 - Collision pieces including drones
 - Environmentally contained agriculture
 - Agriculture data analysis
 - Logistics
 - Agri-food diversification
 - Forestry
 - Land/water/energy efficiency
4. Life sciences and health tech:
- Biotechnology
 - Pharmacy
 - Natural health products
 - Virology
 - Vaccines and therapeutics
 - Digital health
 - Disease prevention
 - Mental health
5. Glycomics:
- All aspects of relating sugars to health
 - Cell surface sugars interactions with viruses such as influenza and covid
 - Metabolomics - using metabolites for precise diagnostics in Life Science and Health Tech

10. Fund Investment Evaluation Analysis

FundCo will use an evaluation template (currently under development) to measure and evaluate the key criteria for an individual investment on both a quantitative and qualitative basis. This will allow FundCo to report to the Board of Directors the overall return on investment, taking into account all the relevant investment criteria.

INCOME TAX CONSIDERATIONS

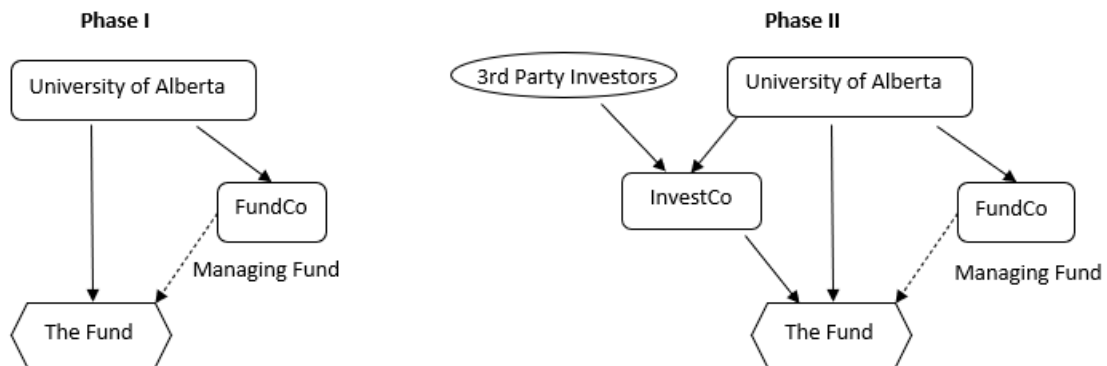
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A. Corporate Structure of the Fund

The university administration has confirmed that it will adopt the corporate structure described below. Under this structure, the Fund will be beneficially owned by the U of A, and FundCo will act as an investment manager making the investment decisions and acting on behalf of the University.

As described herein the following outline depicts the potential form of the arrangement for both Phases I and II.



From an income tax perspective, the key advantage of this structure is that as a separate legal entity, the U of A will be shielded from liability for any commercial activities undertaken by the FundCo while managing the Fund. Such a structure will also protect the U of A from being exposed to an unrelated business activity that may jeopardize the University's registered charity status.

B. Charitable Status

I. Passive Investment vs. Carrying on a Business

The fact that the FundCo, a for-profit business corporation, will be wholly owned by the U of A will not in and of itself be considered carrying on of a business that is not a related business to the University since the FundCo is a separate legal person from the U of A.

This position is supported by the Canada Revenue Agency ("CRA") via various technical interpretations and rulings in which the CRA expressed the view that a charitable organization may hold shares in a subsidiary corporation that operates a business, provided that the investment in the corporation is passive in nature and the charitable organization does not involve itself in the business.³

³ 2009-0306691E5 – Charity owning shares of a subsidiary corporation.

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Additionally, the University's representation on the Board of Directors (the "Board") of the FundCo in and of itself, would not be considered activities that would constitute the carrying on of a business that is not a related business of the University for the purposes of paragraph 149.1(2)(a).⁴

This position is also supported by the CRA's Policy Statement CPS-019 – What is a Related Business? ("CPS-019").

*If the charity establishes a separate taxable corporation, it can invest in the corporation on the same basis that it can invest in any other for-profit business. The charity's directors/trustees would need to satisfy themselves that the investment represents a prudent use of the charity's assets. They also need to be alert to ensure no benefit of a private nature is conferred on the corporation.*⁵

*As long as its own governing documents and provincial legislation allow it to do so, the charity (if it is a charitable organization) can retain control over the taxable corporation through share holdings or a power to nominate the board of directors.*⁶

The CRA recognized charities' need to invest their capital and any funds not required for their current operations. It is stated in CPS-019 that deriving income from investments can be different from carrying on a business. Distinguishing between the two is a question of fact. In the CRA's view, income from investments share a number of characteristics:

- Investment income is derived primarily from the mere ownership of the asset. It is not dependent on active trading such as conducted by dealers who buy an asset in order to sell it as soon as possible at a profit, or the exploitation of the asset such as conducted by manufacturers or resource companies.
- With investment income, the risk to the charity is generally limited to the purchase price of the asset.
- Deriving investment income is also fundamentally a passive activity, in that it does not call upon the charity to take any active role in operating the underlying business.⁷

To summarize the above, to mitigate the risk of the University being perceived as being actively involved in the business activities carried on by the FundCo, it is crucial to restrict U of A's presence within the FundCo to the appointment and representation of the Board of FundCo. The activities of FundCo will be governed by its Board of Directors which will in turn with management of FundCo provide summary reporting only to the Board of Governors of the University.

⁴ Ruling 2011-0431051R3 — Charity's interest in a taxable corporation.

⁵ CPS-019 – What is a related business? Paragraph 47.

⁶ CPS-019 – What is a related business? Paragraph 48.

⁷ CPS-019 – What is a related business? Paragraph 14.

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II. Prudent Investment

As a charitable organization, a registered charity is required to be constituted and operated exclusively for charitable purposes and devote all its resources to charitable activities carried on by the organization itself.⁸

In conjunction with the above considerations of passive investment, the CRA expressed their view by acknowledging jurisprudence at charity law as follows:

*Charity law dictates that a charity's assets be managed so as to obtain the best return within the bounds of **prudent** investment principles. As long as a charity manages its investments prudently, this function would generally be regarded as a necessary administrative function and not a business activity.*⁹

As long as a charity manages its investments prudently, this function would generally be regarded as a necessary administrative function and not a business activity.¹⁰

Provinces have jurisdiction over charities and charitable property, therefore, what constitutes the prudent investor standard are established through the applicable provincial statutes. Pursuant to subsection 75(2) of the APSLA, when making investments a board must adhere to the investment and lending policies, standards and procedures approved under subsection 75(3), which provides that the board must, by resolution, approve policies, standards and procedures that a reasonable and prudent person would apply in respect of a portfolio of investments to avoid undue risk of loss and to obtain a reasonable return.

C. Research Activities

The Fund's proposed model is highly integrated with the University's research activities. Given the innovative approach of these collaborative research activities, we would like to bring your attention to the CRA's Policy Statement CPS-029.¹¹ Within this policy, the CRA provides legal and administrative requirements that a registered charity must fulfill to conduct or fund research as a charitable activity.

Any research that does not directly further a charitable purpose, or the delivery of a charitable program, would not constitute research in the charitable sense.

To be considered charitable at common law, the research that a charity conducts or funds as a charitable activity must:

⁸ "Charitable organization" is defined in subsection 149.1(1) of the ITA.

⁹ CPS-019 – What is a related business? Paragraph 15.

¹⁰ *Ibid.*

¹¹ Policy Statement CPS-029 Research as a charitable activity.

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1. be a way to achieve or further the charity's charitable purpose.
2. be based on a research subject that has educational value and a research proposal that is capable of being attained through research.
3. be undertaken in such a way that it might reasonably lead to the discovery or improvement of knowledge.
4. be conducted primarily for the public benefit and not for self-interest or private commercial consumption.
5. be disseminated and made publicly available to others who might want to access the information.¹²

CPS-029 provides detailed information on how the CRA assesses the above requirements, which should be consulted with upon developing subsequent policies of the Fund.

FUNDCO REPORTING ISSUES

As a taxable corporation, FundCo will be required to prepare and file an annual Corporate Tax Return and will be subject to Federal/Alberta corporate tax to the extent it has taxable income within its fiscal reporting period. Planning will occur to ensure that FundCo will have nominal taxable income in any particular taxation year.

The U of A is considered a 'public agency', as that term is defined under Alberta Public Agencies Governance Act ("**APAGA**"). FundCo will be considered a subsidiary of a public agency pursuant to subparagraph 3(1)(m)(ii) of the Public Sector Compensation Transparency Act ("**PSCTA**"). As a result any compensation paid to an employee of FundCo that is above the reporting threshold provided by the PSCTA will be required to be publicly reported pursuant to the PSCTA.

FundCo will not be considered a 'public agency' in its own right under the APAGA and as a result it is not subject to the Regulations of the Reform of Agencies, Boards and Commissions Compensation Act ("**RABCCA**"). Therefore, no regulatory limits need to be established relating to the setting of compensation levels for employees of FundCo.

INTELLECTUAL PROPERTY POLICY ISSUES

¹² *Ibid.*

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Intellectual Property generated at the University is governed by the Patent Policy¹³, the Copyright Regulations¹⁴, and the Distribution of Royalty Revenue Policy¹⁵. Pursuant to this framework, most intellectual property generated at the University is owned by its creators. However, in the case of patentable intellectual property (PIP) (i.e., intellectual property which is capable of patent protection), inventors who elect to commercialize their PIP do owe several obligations to the University. First, inventors are required to report the PIP to the University through a Report of Invention prior to undertaking any efforts to commercialize the PIP. In the Report of Invention, the inventors must indicate whether they wish to retain ownership of the PIP and commercialize it themselves (in which case the inventors must remit 1/3 of net revenue from the commercialization to the University), or they may choose to assign the PIP to the University and have the University manage the commercialization on their behalf (in which case the University retains 2/3 of the net revenue from the commercialization). Inventors are not required to report intellectual property other than PIP to the University, however they may still elect to voluntarily report and assign other forms of intellectual property (e.g. copyright in a software program or database) to the University in order to have the University commercialize the intellectual property on their behalf. In such cases, any revenue sharing is negotiated between the parties.

The University's policies regarding intellectual property are currently under review by the Intellectual Property and Commercialization Policy and Procedures Review and Recommendation Committee ("**IPC Committee**"). The IPC Committee is chaired by the Legal Counsel (Vice President Research & Innovation), and includes representatives from nine faculties. It is currently reviewing all policies and processes relating to technology commercialization at the University and will be providing recommendations to the VP (Research & Innovation). A final report from the IPC committee is expected before the end of 2022. Any proposed changes relating to the Patent Policy or Copyright Regulations must be negotiated with the Association of Academic Staff of the University of Alberta.

Any recommendations for updates to the current intellectual property policy framework will seek to balance the interests of the University and inventors, in order to ensure that startups emerging from the University are well positioned for investment and success.

FUNDCO OPERATING BUDGET

The University is currently developing an operating and capital budget for the Fund and FundCo operations for the next five years. Any costs or activities relating to fundraising for the Fund will rest with the University.

¹³ <https://policiesonline.ualberta.ca/policiesprocedures/policies/patent-policy.pdf>

¹⁴ <https://www.ualberta.ca/research/media-library/tts/documents/copyrightreg.pdf>

¹⁵ <https://policiesonline.ualberta.ca/policiesprocedures/policies/distribution-of-royalty-revenue-policy.pdf>

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FundCo will require cash flow for employee salaries, which initially will include a CEO and support. All administrative and operating support will be provided by the University for a fee pursuant to the Management Services Agreement negotiated between the parties.

It is anticipated that FundCo will derive its revenue through a fund management fee paid pursuant to the Service Provider Agreement with the University. The amount of the management fee will be established as a combination of a base amount plus an additional fee based on the dollar amount of funds under management.

It is projected that the management fee revenue earned by FundCo will approximate the costs of operating FundCo so that no surplus or deficit will be developed in FundCo.

The operating budget of FundCo will be annually reviewed and approved by the Board of Directors. The FundCo Board will provide summary reporting to the University's Board of Governors on the ongoing operating budget and operations of FundCo.

ACCOUNTING ANALYSIS AND FINANCIAL REPORTING CONSIDERATIONS

Under the Introduction to Public Sector Accounting Standards ("PSAS" or "PS"), PS.05 defines a 'government organization' as any organization controlled by a government that is a separate entity with the power to contract in its own name and that can either legally sue another party or be sued.

Given that FundCo is a separate legal entity wholly-owned and controlled by the U of A, it would meet the definition of a government organization stated in PS.05. Pursuant to PS.16, a government organization may be classified as:

- a) a government business enterprise ("**GBE**");
- b) a government not-for-profit ("**GNPO**"); or
- c) another government organization ("**OGO**").

Since FundCo will be a for-profit corporation, it will not meet the criteria set out for a GNPO. PS .08 states an OGO is a government organization that has all of the following characteristics:

- a) It is a separate entity with the power to contract in its own name and that can sue and be sued.
- b) It is neither a GBE nor a GNPO.

Therefore, if FundCo does not meet the definition of a GBE, it will be considered an OGO.

PS. 07 states a GBE is a government organization that has all of the following characteristics:

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a) It is a separate entity with the power to contract in its own name and that can sue and be sued.

Met: FundCo will be registered as a for-profit corporation with the ability to enter into contracts with third parties.

b) It has been delegated the financial and operational authority to carry on a business.

Met: FundCo will have the power to carry on its own operations by managing investments on behalf of the U of A.

c) It sells goods and services to individuals and organizations outside of the government reporting entity (i.e. the U of A) as its principal activity.

Not Met: As a Fund manager for the U of A, FundCo's sole source of revenues will come from the U of A in the form of management fees.

d) It can, in the normal course of its operations, maintain its operations and meet its liabilities from revenues received from sources outside of the government reporting entity.

Not Met: Since the only source of revenues FundCo will generate will be management fees received from the U of A, FundCo will be reliant on revenues received from the U of A to maintain its normal course of operations.

Therefore, since FundCo does not meet the definition of a GBE, it will be considered an OGO.

As a result of FundCo being considered an OGO, the U of A will be required to consolidate FundCo into its financial statements on a line-by-line basis. (PS 2500)

As an OGO, FundCo will have the choice of following the accounting and financial reporting guidelines under IFRS or PSAS depending on which best fits its users' needs. (PS .19)

THIS SCHEDULE "A" IS INCORPORATED INTO
AND FORMS PART OF THE ARTICLES OF THE CORPORATION

The Corporation is authorized to issue an unlimited number of Class A Common Shares, an unlimited number of Class B Common Shares, an unlimited number of Class C Common Shares, an unlimited number of Class D Common Shares, an unlimited number of Class E Preferred Shares, (the Class E Preferred Shares are the "**Preferred Shares**").

I. CLASS A COMMON SHARES, CLASS B COMMON SHARES, CLASS C COMMON SHARES and CLASS D COMMON SHARES

The rights, privileges, restrictions and conditions attaching to the Class A Common Shares, the Class B Common Shares, the Class C Common Shares and the Class D Common Shares shall be as follows:

1. Voting

1.1 Holders of Class A Common Shares and Class B Common Shares shall be entitled to receive notice of and to attend and vote at all meetings of shareholders of the Corporation, except meetings of holders of another class of shares. Each Class A Common Share and each Class B common Shares shall entitle the holder thereof to one vote.

1.2 Subject to the *Business Corporations Act* (Alberta) (the "Act"), holders of Class C Common Shares and Class D Common Shares shall not be entitled to receive notice of, attend or vote at meetings of shareholders of the Corporation.

2. Dividends

2.1 Subject to the preferences accorded to holders of Preferred Shares and any other shares of the Corporation ranking senior to the Class A Common Shares from time to time with respect to the payment of dividends, holders of Class A Common Shares shall be entitled to receive, if, as and when declared by the Board of Directors, such dividends as may be declared thereon by the Board of Directors from time to time. Holders of Class A Common Shares shall be entitled to receive dividends on the Class A Common Shares exclusive of any other shares of the Corporation.

2.2 Subject to the preferences accorded to holders of Preferred Shares and any other shares of the Corporation ranking senior to the Class B Common Shares from time to time with respect to the payment of dividends, holders of Class B Common Shares shall be entitled to receive, if, as and when declared by the Board of Directors, such dividends as may be declared thereon by the Board of Directors from time to time. Holders of Class B Common Shares shall be entitled to receive dividends on the Class B Common Shares exclusive of any other shares of the Corporation.

2.3 Subject to the preferences accorded to holders of Shares and any other shares of the Corporation ranking senior to the Class C Common Shares from time to time with respect to the payment of dividends, holders of Class C Common Shares shall be entitled to receive, if, as and when declared by the Board of Directors, such dividends as may be declared thereon by the Board of Directors from time to time. Holders of Class C Common Shares shall be entitled to receive dividends on the Class C Common Shares exclusive of any other shares of the Corporation.

2.4 Subject to the preferences accorded to holders of Preferred Shares and any other shares of the Corporation ranking senior to the Class D Common Shares from time to time with respect to the payment of dividends, holders of Class D Common Shares shall be entitled to receive, if, as and when declared by the Board of Directors, such dividends as may be declared thereon by the Board of Directors from time to time. Holders of Class D Common Shares shall be entitled to receive dividends on the Class D Common Shares exclusive of any other shares of the Corporation.

2.5 Any such dividend as may be declared shall not be paid so as to reduce the value of the Preferred Shares below their Redemption Amount (as defined below).

3. Liquidation, Dissolution or Winding-Up

3.1 In the event of the voluntary or involuntary liquidation, dissolution or winding-up of the Corporation or any other distribution of its assets among its shareholders for the purpose of winding-up its affairs (such event referred to herein as a "Distribution") and subject to the preferences accorded to holders of Preferred Shares any other shares of the Corporation ranking senior to the Class A Common Shares, Class B Common Shares, Class C Common Shares and Class D Common Shares from time to time with respect to payment on a Distribution:

- (a) holders of Class A Common Shares shall be entitled, in priority to the entitlement of the holders of Class C Common Shares, Class B Common Shares and Class D Common Shares upon a Distribution, to payment of an amount equal to the stated capital for each Class A Common Share held;
- (b) after payment of the stated capital to the holders of Class A Common Shares pursuant to paragraph (a) above, holders of Class C Common Shares shall be entitled, in priority to the entitlement of the holders of Class B Common Shares and the Class D Common Shares upon a Distribution, to payment of an amount equal to the stated capital for each Class C Common Share held; and
- (c) after payment of the stated capital to the holders of Class A Common Shares pursuant to paragraph (a) above and payment of the stated capital to the holders of Class C Common Shares pursuant to paragraph (b) above, holders of Class A Common Shares, Class B Common Shares, Class C Common Shares and Class D Common Shares shall be entitled to share equally, share for share, in the remaining property of the Corporation.

II. CLASS E PREFERRED SHARES

There shall only be one issuance of Class E Preferred Shares and the rights, privileges, restrictions and conditions attaching to the Class E Preferred Shares are as follows:

1. Definition of Redemption Amount

1.1 "**Redemption Amount**" for a Class E Preferred Share shall be equal to the fair market value of the property received by the Corporation in respect of the first issuance of the Class E Preferred Shares minus the fair market value of the non-share consideration paid or debt assumed by the Corporation in partial consideration for such property (with the fair market value being fixed by the Board of Directors as at the time of such first issuance of Class E Preferred Shares) divided by the number of Class E

Preferred Shares issued at that time, plus any declared but unpaid non-cumulative dividends payable thereon as of the date of redemption, provided that if at a particular time the fair market value of such property less the fair market value of any non-share consideration paid or debt assumed by the Corporation shall be determined:

- (a) by tribunal or court of competent jurisdiction;
- (b) by agreement with Canada Revenue Agency;
- (c) by a valuator acceptable to the Corporation and the holder of Class E Preferred Shares issued for such consideration; or
- (d) by agreement between the Corporation and the holder of the Class E Preferred Shares;

to be different from the fair market value fixed by the Board of Directors, the fair market value shall be adjusted by being increased or decreased, as the case may be, so as to equal the fair market value so determined. The fair market value so adjusted shall be effective as of the time the Class E Preferred Shares were issued and the Redemption Amount per Class E Preferred Share shall be appropriately adjusted by resolution of the Board of Directors of the Corporation. Any resultant overpayment by the Corporation to the holders or former holders of such Class E Preferred Shares (whether by way of redemption, repurchase or otherwise, but not by way of earlier dividend) shall be a debt due by the holders or former holders of such Class E Preferred Shares to the Corporation and shall be repaid to the Corporation forthwith, and any resultant underpayment by the Corporation to the holders or former holders of such Class E Preferred Shares (whether by way of redemption, repurchase or otherwise, but not by way of earlier dividend) shall be a debt due by the Corporation to the holders or former holders of such Class E Preferred Shares and shall be paid forthwith to such holders or former holders.

2. Voting Rights

2.1 Subject to the Act, holders of Class E Preferred Shares shall not be entitled to receive notice of, attend or vote at any meetings of the shareholders of the Corporation.

3. Dividends

3.1 The holders of Class E Preferred Shares shall be entitled to receive, if, as and when declared by the Board of Directors of the Corporation a preferential, non-cumulative dividend in respect of each calendar year at a rate per annum as may reasonably be determined by the Directors of the Corporation at the time of issuance of the Class E Preferred Shares multiplied by the Redemption Amount of such Class E Preferred Shares for such calendar year, provided that in the calendar year in which the Class E Preferred Shares are issued or redeemed such dividend entitlement shall be reduced proportionate to the number of days of such year that any Class E Preferred Shares are issued and outstanding.

3.2 No dividends shall be declared or paid in any year on the Common Shares or the other Preferred Shares or any other shares of the Corporation ranking junior to the Class E Preferred Shares from time to time with respect to the payment of dividends, unless all dividends which shall have been declared and which remain unpaid on the Class E Preferred Shares then issued and outstanding shall have been paid or provided for at the date of such declaration or payment.

3.3 If within four months after the expiration of any calendar year the Board of Directors shall not have declared a dividend on the Class E Preferred Shares in respect of such calendar year, the rights of holders of Class E Preferred Shares to a dividend for such calendar year shall be forever extinguished. If a dividend is declared during such four month period, the rights of holders of Class E Preferred Shares to any further dividend for such calendar year shall be forever extinguished.

3.4 The rights of holders of Class E Preferred Shares to dividends in any year shall be limited to the non-cumulative, preferential dividend specified in this clause II.3.

4. Liquidation

4.1 In the event of a Distribution, holders of Class E Preferred Shares shall be entitled, in priority to the Common Shares and any other shares ranking junior to the Class E Preferred Shares from time to time with respect to payment on a Distribution to payment of an amount equal to the Redemption Amount for such Class E Preferred Shares and all such amounts shall be paid to the holders of the Class E Preferred Shares before any amounts are paid to the holders of Common Shares any other shares ranking junior to the Class E Preferred Shares from time to time with respect to payment on a Distribution. The participation rights of the Class E Preferred Shares of the Corporation shall rank *pari passu* with the other Preferred Shares of the Corporation. The Class E Preferred Shares shall not confer a right to any further participation in the property of the Corporation on a Distribution.

5. Redemption by the Corporation

5.1 Subject to the Act, the Corporation may, upon giving notice or upon the waiver of such notice as hereinafter provided, redeem at any time the whole or from time to time any part of the then outstanding Class E Preferred Shares on payment or deposit (in accordance with clause II.5.4) of the Redemption Amount for each Class E Preferred Share to be redeemed. If part only of the Class E Preferred Shares are to be redeemed, the Board of Directors may select the Class E Preferred Shares to be redeemed (i) by lot; (ii) on a pro rata basis; or (iii) in such other manner as the Board of Directors may in their discretion select. If part only of the Class E Preferred Shares represented by any certificate are redeemed, a new certificate for the balance shall be issued at the expense of the Corporation.

5.2 In the case of a redemption of Class E Preferred Shares, the Corporation shall give notice in writing of the intention of the Corporation to redeem such shares (unless notice is waived in any manner by the holder of the Class E Preferred Shares called for redemption) at least 21 days before the date specified for redemption (the date specified for redemption to be referred to in this clause II.5 as the "Redemption Date") to each person who at the date of mailing is a holder of Class E Preferred Shares to be redeemed, provided that accidental failure to give such notice to one or more of such shareholders shall not affect the validity of such redemption. Such notice shall set out the Redemption Amount per Class E Preferred Share, the Redemption Date, the name of the chartered bank or trust company at which the Redemption Amount may be deposited (if the Redemption Amount may be deposited pursuant to clause II.5.4) and, if part only of the Class E Preferred Shares held by the person to whom it is addressed is to be redeemed, the number thereof to be redeemed.

5.3 Subject to the Act, the Corporation shall pay to the holder of the Class E Preferred Shares to be redeemed the Redemption Amount of each such share on or after the Redemption Date, provided that such holder has presented and surrendered to the Corporation the certificates representing the Class E Preferred Shares so called for redemption. Payment for Class E Preferred Shares to be redeemed by the Corporation shall be made by cheque payable at par in Canadian funds at any branch of the

Corporation's bankers. Such cheques shall be sent in accordance with the Act to holders of such Class E Preferred Shares and redemption shall be deemed to have taken place upon such sending.

5.4 The Corporation shall have the right at any time after the mailing of notice of its intention to redeem any Class E Preferred Shares to deposit the Redemption Amount for each Class E Preferred Share so called for redemption, or of such of those shares represented by certificates which have not at the date of such deposit been presented and surrendered by the holders thereof in connection with such redemption, to a special account in any chartered bank or in any trust company in Canada named in such notice, to be paid without interest to or to the order of the respective holders of such Class E Preferred Shares called for redemption upon presentation and surrender to such bank or trust company of the certificates representing same. The Class E Preferred Shares in respect whereof this deposit has been made shall be deemed to be redeemed on the later of the date of such deposit and the Redemption Date. On such applicable date the Corporation shall adjust its securities register to show that such Class E Preferred Shares have been redeemed and the rights of the holders thereof shall be limited to receiving, without interest, the Redemption Amount per Class E Preferred Share so deposited. Any interest allowed on such deposit shall belong to the Corporation. After the Redemption Amount for such Class E Preferred Shares has been deposited with any chartered bank or trust company in Canada, as aforesaid, notice shall be given to the holders of any Class E Preferred Shares called for redemption who have failed to present and surrender the certificates representing such shares within two months of the Redemption Date that the money has been so deposited and may be obtained by the holders of these Class E Preferred Shares upon presentation and surrender of the certificates representing such shares called for redemption at such bank or trust company.

5.5 From and after the Redemption Date, the holders of any such Class E Preferred Shares to be redeemed shall not be entitled to exercise any of the rights of the holders of Class E Preferred Shares in respect thereof unless payment or deposit of the Redemption Amount per Class E Preferred Share shall not be made in accordance with the foregoing provisions, in which event the rights of the holders of such Class E Preferred Shares shall remain unaffected.

6. Redemption at the Option of the Holders of Class E Preferred Shares

6.1 Subject to the provisions of the Act, a holder of Class E Preferred Shares shall be entitled to require the Corporation to redeem at any time or from time to time all or any part of the Class E Preferred Shares held by such holder by depositing with the Corporation:

- (a) an irrevocable request in writing specifying:
 - (i) that such holder desires to have the whole or any part of the Class E Preferred Shares held by such holder redeemed by the Corporation; and
 - (ii) the business day, which shall not be less than thirty days after the day on which the request in writing is deposited with the Corporation, on which the holder desires to have the Corporation redeem such shares (the "Retraction Date" for the purposes of this clause II.6); and
- (b) the share certificate(s) representing the Class E Preferred Shares which the holder desires to have the Corporation redeem.

If only part of the Class E Preferred Shares represented by any certificate is to be redeemed, a new certificate for the balance shall be issued at the expense of the Corporation.

6.2 On the Retraction Date the Corporation, if permitted by the Act, shall redeem the number of Class E Preferred Shares to be redeemed by paying the holder of such Class E Preferred Shares an amount per share equal to the Redemption Amount, provided that all requirements set out under this clause II.6 have been complied with. Payment for Class E Preferred Shares to be redeemed by the Corporation shall be made by cheque payable at par in Canadian funds at any branch of the Corporation's bankers. Such cheque shall be sent in accordance with the Act to the holder of such Class E Preferred Shares and redemption shall be deemed to have taken place upon such sending. If on the Retraction Date the Corporation would be prevented by the Act from redeeming all of the Class E Preferred Shares requested by the holder thereof to be redeemed, the Corporation shall redeem, disregarding fractions, that number of Class E Preferred Shares that it is permitted by the Act to redeem and the Corporation shall redeem the balance of the outstanding Class E Preferred Shares requested by such holder to be redeemed at the earliest time or times as the redemption is permitted by the Act.

6.3 From and after the Retraction Date, the holders of any such Class E Preferred Shares to be redeemed shall not be entitled to exercise any of the rights of the holders of Class E Preferred Shares in respect thereof unless payment of the Redemption Amount per Class E Preferred Share shall not be made in accordance with the foregoing provisions, in which event the rights of the holders of such Class E Preferred Shares shall remain unaffected.

7. Restricted Payments to the Holders of Shares of Other Classes

7.1 The Corporation shall not make any Restricted Payment (as defined in clause II.7.2) to a holder of shares of the Corporation of any class other than Class E Preferred Shares if the Corporation is, or would after making the Restricted Payment be, unable to pay to the holders of Class E Preferred Shares the Redemption Amount for each Class E Preferred Share held.

7.2 For the purpose of clause II.7.1, the Corporation makes a Restricted Payment when it:

- (a) declares or pays a dividend other than a stock dividend consisting of shares of a class other than Class E Preferred Shares,
- (b) makes any payment to purchase, redeem or otherwise acquire any shares of the Corporation of any class other than Class E Preferred Shares, or
- (c) gives financial assistance by means of a loan, guarantee or otherwise.

BY-LAWS

A by-law relating generally to the transaction of the business and affairs

of

_____ LTD.

CONTENTS

<u>SECTION</u>	<u>SUBJECT</u>
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Two	Business of the Corporation
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Four	Committees
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Six	Shares
Seven	Dividends
Eight	Meetings of Shareholders
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Ten	Effective Date

IT IS HEREBY ENACTED as the By-Laws of _____ Alberta Ltd. (hereinafter called the "Corporation") as follows:

SECTION ONE INTERPRETATION

1.01 Definitions

In the By-Laws of the Corporation, unless the context otherwise requires:

"Act" means the *Business Corporations Act* of Alberta and any statute that may be substituted therefore, as from time-to-time amended

"appoint" includes "elect" and vice versa

"Articles" means the articles attached to the Certificate of Incorporation of the Corporation as from time-to-time amended or restated

"Board" means the Board of Directors of the Corporation

"By-Laws" means this By-Law and other By-Laws of the Corporation from time-to-time in force and effect

"meeting of shareholders" means any meeting of Shareholders, including any meeting of one or more classes or series of shareholders

"recorded address" means, in the case of a shareholder, his address as recorded in the securities register; in the case of joint shareholders, the address appearing in the Securities Register in respect of such joint holding or the first address so appearing if there are more than one; and in

the case of a director, officer, auditor or member of a committee of the Board, his latest address as recorded in the records of the Corporation

"signing officer" means, in relation to any instrument, any person authorized to sign the same on behalf of the Corporation by Section 2.03 or by a resolution passed pursuant thereto.

Save as aforesaid, words and expressions defined in the Act have the same meanings when used herein; and words importing the singular number include the plural and vice versa;; words importing gender include the masculine, feminine and neuter genders; and words importing persons include individuals, bodies corporate, partnerships, trusts and unincorporated organizations.

1.02 Conflict with the Act, the Articles or any Unanimous Shareholder Agreement

To the extent of any conflict between the provisions of the By-Laws and the provisions of the Act, the Articles or any unanimous shareholder agreement relating to the Corporation, the provisions of the Act, the Articles or the unanimous shareholder agreement shall govern.

1.03 Headings and Sections

The headings used throughout the By-Laws are inserted for convenience of reference only and are not to be used as an aid in the interpretation of the By-Laws. "Section" followed by a number means or refers to the specified section of this By-Law.

1.04 Invalidity of any provision of By-Laws

The invalidity or unenforceability of any provision of the By-Laws shall not affect the validity or enforceability of the remaining provisions of the By-Laws.

SECTION TWO BUSINESS OF THE CORORATION

2.01 Corporate Seal

The corporate seal of the Corporation, if any, shall be in such form as the Board may from time-to-time by resolution approve.

2.02 Financial Year

The financial year of the Corporation shall end on such date in each year as the Board may from time-to-time by resolution determine.

2.03 Execution of Instruments

Deeds, transfers, assignments, contracts, obligations, certificates and other instruments shall be signed on behalf of the Corporation by two persons, one of whom holds the office of Chair of the Board, President, Vice-President or Director and the other of whom holds one of the said offices or the office of Secretary, Treasurer, Assistant Secretary or Assistant Treasurer or any other office created by by-law or resolution of the Board; provided that if the Corporation has one Director, that Director alone may sign any instruments on behalf of the Corporation. In addition, the Board may from time-to-time direct the manner in which, and the person or persons by whom, any instrument or instruments may or shall be signed. Any signing officer may affix the corporate seal to any instrument requiring the same.

2.04 Banking Arrangements

The banking business of the Corporation, including, without limitation, the borrowing of money and the giving of security therefore, shall be transacted with such banks, trust companies or other bodies corporate or organizations as may from time-to-time be authorized by the Board. Such banking business or any part thereof shall be transacted under such agreements, instructions and delegations of powers as the Board may from time-to-time prescribe or authorize.

2.05 Voting Rights in Other Bodies Corporation

The signing offices may execute and deliver proxies and arrange for the issuance of voting certificates or other evidence of the right to exercise the voting rights attaching to any securities held by the Corporation. Such instruments, certificates or other evidence shall be in favour of such person or persons as may be determined by the persons executing such proxies or arranging for the issuance of voting certificates or such other evidence of the right to exercise such voting rights. In addition, the Board, or, failing the Board, the signing officers may from time-to-time direct the manner in which and the person or persons by whom any particular voting rights or class of voting rights may or shall be exercised.

2.06 Insider Trading Reports and Other Filings

Any one Officer or Director of the Corporation may execute and file on behalf of the Corporation insider trading reports and other filings of any nature whatsoever required under applicable corporate or securities law.

2.07 Divisions

The Board may from time-to-time cause the business and operations of the Corporation or any part thereof to be divided into one or more divisions upon such basis, including, without limitation, types of business or operations, geographical territories, product lines or goods or services, as the Board may consider appropriate in each case. From time-to-time, the Board may authorize upon such basis as may be considered appropriate in each case:

- (a) the designation of any such division by, and the carrying on of the business and operations of any such division under a name other than the name of the Corporation; provided that the Corporation shall set out its name in legible characters in all contracts, invoices, negotiable instruments and orders for goods or services issued or made by or on behalf of the Corporation; and
- (b) the appointment of officers for any such division and the determination of their powers and duties, provided that any such officers shall not, as such, be officers of the Corporation.

SECTION THREE DIRECTORS

3.01 Number of Directors

- (a) If the Articles provide for a minimum number and a maximum number of Directors, unless otherwise provided in the Articles, the number of Directors of the Corporation shall be determined from time-to-time by resolution of the Shareholders;
- (b) A director shall be elected for a two (2) year term and may be re-elected for subsequent two (2) year terms, up to a maximum aggregate of serving six (6) years in total. Notwithstanding the foregoing, the initial directors of the Corporation shall be elected in staggered terms, namely half of the directors shall be appointed for an initial one (1) year term and may be re-

elected for subsequent two (2) year terms, but only to a maximum aggregate of serving five (5) years in total; and the other half of the initial directors shall be elected for an initial two (2) year term and may be re-elected for subsequent two (2) year terms, but only to a maximum aggregate of serving six (6) years in total.

3.02 Calling and Notice of Meetings

Meetings of the Board shall be called and held on such time and at such place as the Board, the Chair of the Board, the President or any two Directors may determine, and the Secretary or any other Officer shall give notice of meetings when directed or authorized by such persons. Notice of each meeting of the Board shall be given in the manner provided in the Act to each Director not less than Forty-Eight (48) hours before the time when the meeting is to be held, provided that if a quorum of Directors is present, the Board may, without notice, hold a meeting immediately following an annual meeting of Shareholders. Notice of a meeting of the Board may be given verbally, in writing, electronically or by telephone or videoconference, or any other means of communication. A notice of a meeting of Directors need not specify the purpose of or the business to be transacted at the meeting, except where required by the Act. Notwithstanding the foregoing, the Board may from time-to-time fix a day or days in any month or months for regular meetings of the Board at a place and hour to be named, in which case, provided that a copy of any such resolution is sent to each Director forthwith after being passed and forthwith after each Director's appointment, no other notice shall be required for any such regular meeting except where the Act requires specification of the purpose or the business to be transacted thereat.

3.03 Place of Meetings

Meetings of the Board may be held at any place in or outside Alberta. A Director who attends a meeting of Directors, in person or by telephone, videoconference or other communication facilities pursuant to Section 3.04, is deemed to have consented to the location of the meeting except when he attends the meeting for the express purpose of objecting to the transaction of any business on the grounds that the meeting is not lawfully held.

3.04 Meetings by Telephone or Videoconference

With the consent of the Chair of the meeting or a majority of the Directors present at the meeting, a Director may participate in a meeting of the Board or of a committee of the Board by means of telephone, videoconference or other communication facilities that permit all persons participating in the meeting to hear each other. A Director participating in such a meeting in such manner shall be considered present at the meeting and at the place of the meeting.

3.05 Quorum

The quorum for the transaction of business at any meeting of the Board shall consist of a majority of Directors or such greater or lesser number of Directors as the Board may from time-to-time determine, provided that, if the Board consists of only one Director, the quorum for the transaction of business at any meeting of the Board shall consist of one Director.

3.06 Chair

The Chair of any meeting of the Board shall be the Director present at the meeting who is the first mentioned of the following officers as have been appointed: Chair of the Board, President or a Vice-President (in order of seniority). If no such officer is present, the Directors present shall choose one of their number to be Chair.

3.07 Action by the Board

At all meetings of the Board, every question shall be decided by a majority of the votes cast on the question. In case of an equality of votes, the Chair of the meeting shall be entitled to a

second or casting vote. The powers of the Board may be exercised by resolution passed at a meeting at which a quorum is present or by resolution in writing signed by all the Directors who would be entitled to vote on that resolution at a meeting of the Board. Resolutions in writing may be signed in counterparts.

3.08 Adjourned Meeting

Any meeting of Directors may be adjourned from time-to-time by the Chair of the meeting, with the consent of the meeting, to a fixed time and place. The adjourned meeting shall be duly constituted if a quorum is present and if it is held in accordance with the terms of the adjournment. If there is no quorum present at the adjourned meeting, the original meeting shall be deemed to have terminated forthwith after its adjournment.

3.09 Remuneration and Expenses

The Directors shall be paid such remuneration for their services as the Board may from time-to-time determine. The Directors shall also be entitled to be reimbursed for reasonable travelling and other expenses properly incurred by them in attending meetings of the Board or any committee thereof. Nothing herein contained shall preclude any Director from serving the Corporation in any other capacity and receiving remuneration therefore.

3.10 Officers

The Board from time-to-time may appoint one or more Officers of the Corporation and, without prejudice to rights under any employment contract, may remove any Officer of the Corporation. The powers and duties of each Officer of the Corporation shall be those determined from time-to-time by the Board and, in the absence of such determination, shall be those usually incidental to the office held.

3.11 Agents and Attorneys

The Board shall have the power from time-to-time to appoint agents or attorneys for the Corporation in or outside Canada, with such powers of management or otherwise (including the power to sub-delegate) as may be thought fit.

SECTION FOUR COMMITTEES

4.01 Transaction of Business

The powers of any committee of Directors may be exercised by a meeting at which a quorum is present or by resolution in writing signed by all the members of such committee who would have been entitled to vote on that resolution at a meeting of the committee. At all meetings of committees, every question shall be decided by a majority of the votes cast on the question. In case of an equality of votes, the Chair of the meeting shall be entitled to a second or vesting vote. Resolutions in writing may be signed in counterparts.

4.02 Procedure

Unless otherwise determined by the Board, a quorum for meetings of any committee shall be a majority of its members, each committee shall have the power to appoint its chair and the rules for calling, holding, conducting and adjourning meetings of the committee shall be the same as those governing the Board. Each member of a committee shall serve during the pleasure of the Board of Directors, and, in any event, only so long as he shall be a Director. The Directors may fill vacancies in a committee by appointment from among their members. Provided that a quorum

is maintained, the committee may continue to exercise its powers notwithstanding any vacancy among its members.

SECTION FIVE PROTECTION OF DIRECTORS AND OFFICERS

5.01 Limitation of Liability

No Director or Officer for the time being of the Corporation shall be liable for the acts, receipts, neglects or default s of any other Director or Officer or employee, or for joining in any receipt or act for conformity, or for any loss, damage or expense happening to the Corporation through the insufficiency or deficiency of title to any property acquired by the Corporation or for or on behalf of the Corporation or for the insufficiency or deficiency of any security in or upon which any of the monies of or belonging to the Corporation shall be placed or invested, or for any loss or damage arising from the bankruptcy, insolvency or tortuous act of any person, firm or corporation, including any person, firm or corporation with whom or with which any monies, securities or effects shall be lodged or deposited, or for any loss, conversion, misapplication or misappropriation of or any damage resulting from any dealings with any monies, securities or other assets of or belonging to the Corporation or for any other loss, damage or misfortune whatsoever which may happen in the execution of the duties of his respective office or trust or in relation thereto unless the same shall happen by or through his failure to exercise the powers and to discharge the duties of his office honestly, in good faith and with a view to the best interests of the Corporation and to exercise the care, diligence and skill that a reasonably prudent person would exercise in comparable circumstances.

5.02 Indemnity

The Corporation shall, to the maximum extent permitted under the Act, indemnify a Director or Officer, a former Director or Officer, and a person who acts or acted at the Corporation's request as a director or officer of a body corporate of which the Corporation is or was a shareholder or creditor, and his heirs and legal representatives, against all costs, charges and expenses, including any amount paid to settle an action or satisfy a judgment, reasonably incurred by him in respect of any civil, criminal or administrative action or proceeding to which he is made a party by reason of being or having been a director or officer of the Corporation or such body corporate.

SECTION SIX SHARES

6.01 Non-Recognition of Trusts

Subject to the provisions of the Act, the Corporation may treat as the absolute owner of any share the person in whose name the share is registered in the Securities Register as if that person had full legal capacity and authority to exercise all rights of ownership, irrespective of any indication to the contrary through knowledge or notice or description in the Corporation's records or on the share certificate.

6.02 Joint Shareholders

If two or more persons are registered as joint holders of any share:

- (a) the Corporation shall record only one address on its books for such joint holders; and
- (b) the address of such joint holders for all purposes with respect to the Corporation shall be their recorded address;

any one such persons may give effectual receipts for the certificates issued in respect thereof or for any dividend, bonus, return of capital or other money payable or warrant issuable in respect of such share.

SECTION SEVEN DIVIDENDS

7.01 Dividend Cheques

A dividend payable in cash shall be paid by cheque of the Corporation or of any dividend paying agent appointed by the Board, to the order of each registered holder of shares of the class or series in respect of which it has been declared and mailed by pre-paid ordinary mail to such registered holder at his recorded address, unless such holder otherwise directs and the Corporation agrees to follow such direction. In the case of joint holders, the cheque shall, unless such joint holders otherwise direct and the Corporation agrees to follow such direction, be made payable to the order of all of such joint holders and mailed to them at their recorded address. The mailing of such cheque as aforesaid, unless the same is not paid on due presentation, shall satisfy and discharge the liability for the dividend to the extent of the sum represented thereby plus the amount of any tax which the Corporation is required to and does withhold.

7.02 Non-Receipt of Cheques

In the event of non-receipt of any dividend cheque by the person to whom it is sent as aforesaid, the Corporation shall issue to such person a replacement cheque for a like amount on such terms as to indemnity, reimbursement of expenses and evidence of non-receipt and of title as the Board may from time-to-time prescribe, whether generally or in any particular case.

7.03 Unclaimed Dividends

Any dividend unclaimed after a period of six years from the date on which the same has been declared to be payable, shall be forfeited and shall revert to the Corporation.

SECTION EIGHT MEETINGS OF SHAREHOLDERS

8.01 Chair, Secretary and Scrutineers

The Chair of any meeting of Shareholders, who need not be a Shareholder of the Corporation, shall be the first mentioned of the following officers as has been appointed and is present at the meeting: Chair of the Board, President or Vice-President (in order of seniority). If no such officer is present and willing to act as Chair within fifteen minutes from the time fixed for holding the meeting, the persons present and entitled to vote shall choose one of their number to be Chair. The Chair shall conduct the proceedings at the meeting in all respects and his decision in any matter or thing, including, but without in any way limiting the generality of the foregoing, any question regarding the validity or invalidity of any instruments of proxy and any question as to the admission or rejection of a vote, shall be conclusive and binding upon the Shareholders. The Secretary of any meeting of Shareholder shall be the Secretary of the Corporation, provided that if the Corporation does not have a Secretary or if the Secretary of the Corporation is absent, the Chair shall appoint some person, who need not be a Shareholder, to act as Secretary of the meeting. The Board may from time-to-time appoint in advance of any meeting of Shareholders one or more persons to act as scrutineers at such meeting and, in the absence of such appointment, the Chair may appoint one or more persons to act as scrutineers at any meeting of Shareholders. Scrutineers so appointed may, but need not be, shareholders, directors, officers or employees of the Corporation.

8.02 Persons Entitled to be Present

The only persons entitled to be present at a meeting of Shareholders shall be:

- (a) those entitled to vote at such meeting;
- (b) the Directors and auditors of the Corporation;
- (c) others who, although not entitled to vote, are entitled or required under any provision of the Act, the Articles or the By-Laws to be present at the meeting;
- (d) legal counsel to the Corporation when invited by the Corporation to attend the meeting; and
- (e) any other person on the invitation of the Chair or with the consent of the meeting.

8.03 Quorum

A quorum for the transaction of business at any meeting of Shareholders shall be at least two persons present in person, each being a Shareholder entitled to vote thereat or a duly appointed proxy or representative for an absent Shareholder so entitled, and representing in the aggregate not less than Ten (10%) per cent of the outstanding shares of the Corporation carrying voting rights at the meeting, provided that if there should be only one Shareholder of the Corporation entitled to vote at any meeting of Shareholders, the quorum for the transaction of business at the meeting of Shareholders shall consist of the one Shareholder.

8.04 Representatives

The authority of an individual to represent a body corporate or association at a meeting of Shareholders of the Corporation shall be established by depositing with the Corporation a certified copy of the resolution of the Directors or governing body of the body corporate or association, as the case may be, granting such authority, or in such other manner as may be satisfactory to the Chair of the meeting.

8.05 Action by Shareholders

The Shareholders shall act by ordinary resolution unless otherwise required by the Act, Articles, By-Laws, or any unanimous shareholder agreement. In case of an equality of votes upon either a show of hand or upon a poll, the Chair of the meeting shall not be entitled to a second or casting vote.

8.06 Show of Hands

Upon a show of hands, every person who is present and entitled to vote shall have one vote. Whenever a vote by show of hands shall have been taken upon a question, unless a ballot thereon is required or demanded, a declaration by the Chair of the meeting that the vote upon the question has been carried or carried by a particular majority or not carried and an entry to that effect in the minutes of the meeting shall be prima facie evidence of the fact without proof of the number or proportion of the votes recorded in favour of or against any resolution or other proceeding in respect of the said question, and the result of the vote so taken shall be the decision of the Shareholders upon the said question.

8.07 Ballots

A ballot required or demanded shall be taken in such manner as the Chair shall direct. A requirement or demand for a ballot may be withdrawn at any time prior to the taking of the ballot. If a ballot is taken, each person present shall be entitled, in respect of the shares which he is

entitled to vote at the meeting upon the question, that that number of votes provided by the Act or the Articles, and the result of the ballot so taken shall be the decision of the Shareholders upon the said question.

8.08 Meetings by Telephone or Videoconference

With the consent of the Chair of the meeting or the consent (as evidenced by a resolution) of the persons present and entitled to vote at the meeting, a Shareholder or any other person entitled to attend a meeting of Shareholders may participate in the meeting by means of telephone, videoconference or other communication facilities that permit all persons participating in the meeting to hear each other, and a person participating in such a meeting by those means shall be considered present at the meeting and at the place of the meeting.

**SECTION NINE
NOTICE**

9.01 Omissions and Errors

The accidental omission to give any notice to any Shareholder, Director, Officer, auditor or member of a committee of the Board or the non-receipt of any notice by any such person or any error in any notice not affecting the substance thereof, shall not invalidate any action taken at any meeting held pursuant to such notice or otherwise founded thereon.

9.02 Persons Entitled by Death or Operation of Law

Every person who, by operation of law, transfer, death of a Shareholder or any other means whatsoever shall become entitled to any share, shall be bound by every notice in respect of such share which shall have been duly given to the Shareholder from who he derives his title to such share prior to his name and address being entered on the Securities Register (whether such notice was given before or after the happening of the event upon which he became so entitled) and prior to his furnishing to the Corporation the proof of authority or evidence of his entitlement prescribed by the Act.

**SECTION TEN
EFFECTIVE DATE AND REPEAL**

10.01 Effective Date

This By-Law shall come into force when made by the Board in accordance with the Act.

10.02 Repeal

All previous By-Laws of the Corporation are repealed as of the coming into force of this By-Law. Such repeal shall not affect the previous operation of any By-Law so repealed or affect the validity of any act done or right, privilege, obligation or liability acquired or incurred under, or the validity of any contract or agreement made pursuant to or the validity of any Articles (as defined in the Act) or predecessor charter documents of the Corporation obtained pursuant to, any such By-Law prior to its repeal. All Officers and persons acting under any such By-Law so repealed shall continue to act as if appointed under the provisions of this By-Law and all resolutions of the Shareholders, the Board or a committee of the Board with continuing effect passed under any repealed By-Law shall continue to be good and valid except to the extent inconsistent with this By-Law and until amended or repealed.

MADE by the Board the ____ day of _____, 2022

President –

CONFIRMED by the Shareholders in accordance with the Act the ____ day of _____, 2022

President –

**Governance Executive Summary
Action Item**

Agenda Title	Strategic Initiatives Fund Allocations
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Motion 1

THAT the Board Finance and Property Committee recommend that the Board of Governors approve an allocation of \$20 million from the Strategic Initiatives Fund for deferred maintenance initiatives.

Motion 2

THAT the Board Finance and Property Committee recommend that the Board of Governors approve an allocation of \$2 million from the Strategic Initiatives Fund to an internally restricted Universities Academic Pension Plan (UAPP) risk management reserve.

Item

Action Requested	<input type="checkbox"/> Approval <input checked="" type="checkbox"/> Recommendation
Proposed by	Todd Gilchrist, Vice-President (University Services and Finance)
Presenter(s)	Todd Gilchrist, Vice-President (University Services and Finance) Martin Coutts, Associate Vice-President (Finance, Procurement and Planning)

Details

Office of Administrative Responsibility	Office of the Vice-President (University Services and Finance)
The Purpose of the Proposal is <i>(please be specific)</i>	The motions are before the committee to request recommendation to allocate from the Strategic Initiatives Fund, in accordance with the University Funds Investment Policy: <ul style="list-style-type: none"> • \$20 million to a deferred maintenance fund; and • \$2 million to an internally restricted UAPP risk management reserve.
Executive Summary <i>(outline the specific item – and remember your audience)</i>	<p>The establishment of a Strategic Initiatives Fund (the “SIF”) was approved at the Board of Governors meeting on December 4, 2018. The creation of the SIF and details regarding its management are contained in the University Funds Investment Policy (the “Policy”). The Policy allows for appropriations from the Investment Income Reserve (the “IIR”) to the SIF for strategic initiatives when the market value of the underlying investment strategies exceeds their obligations (cost) by a factor of 17%. The Policy provides senior Administration the authority to appropriate funds from the IIR to the SIF.</p> <p>As at March 31, 2022, the excess of market value over cost in the IIR was recorded at 24%. In response, senior Administration endorsed an appropriation of \$32 million from the IIR to the SIF.</p> <p>It is anticipated, on May 30, 2022, the Board Audit and Risk Committee (BARC) will have recommended and the Board of Governors (BOG) approved the FY 2022 year end financial statements noting this appropriation.</p>

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Administration now requests BFPC recommend to BOG, at their June 17, 2022 meeting, the approval of a total of \$22 million of allocations from the SIF as follows:

- \$20 million to a deferred maintenance fund; and
- \$2 million of allocations to an internally restricted UAPP risk management reserve.

Following the above detailed BFPC recommendations and BOG approvals, \$10 million would remain as an appropriation in the SIF for future allocation.

Deferred Maintenance Fund

The university has identified a deferred maintenance liability for at least the last 20 years. Administration understands the urgency in addressing the university's deferred maintenance liability, with an immediate focus on high priority issues associated with life, health and safety, and potential critical building failures.

As the university explores a comprehensive Asset Management Master Plan, inclusive of funding options, some of the most pressing deferred maintenance issues would be addressed with this one-time allocation from the SIF.

It is acknowledged the \$20 million allocation to strategic deferred maintenance initiatives serves to address only a small portion of the overall liability. However, it provides a means to address some of the most urgent needs and would be a positive signal of the university's commitment to begin addressing the issue.

Pension Plan

The April 27, 2021 joint meeting of BARC and BHRCC was convened to address risk associated with the two university pension plans: Public Service Pension Plan and the Universities Academic Pension Plan (UAPP). Subsequently, Willis Towers Watson (WTW) was contracted to conduct a further review, assess risks of these plans, and identify any required mitigation.

The WTW report, dated November 17, 2021, was presented at the March 7, 2022, meeting of BARC and provided the university with an independent assessment of the risk associated with the potential future contribution rates related to the UAPP pre-1992 unfunded liability. WTW identified a risk with the underlying assumptions and resultant employer contributions. It was estimated that an annual \$2 million contribution to an internally restricted UAPP risk management reserve earning 4% would be sufficient to fund potential incremental employer contributions required to offset the combined impact of contributions being 1% lower,

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	<p>benefit payments 0.5% higher, and investment returns 1% lower, thus mitigating this risk to an acceptable level.</p> <p>The internally restricted UAPP risk management reserve funding would commence immediately, based on fiscal 2021-22 year end results, with regular contributions expected to continue for fiscal year 2022-23 and beyond, depending on fiscal and economic conditions. Should the reserve not be required, as the pre-92 UAPP unfunded liability winds down (projected in 2043), it would be returned to the SIF for allocation to other identified strategic priorities. It is anticipated that this will be known with some certainty by 2033.</p> <p>The adequacy of the internally restricted UAPP risk management reserve will be evaluated every three years in conjunction with the UAPP's actuarial valuation, which is next scheduled for December 31, 2023.</p>
Supplementary Notes / context	

Engagement and Routing (Include meeting dates)

<p>Consultation and Stakeholder Participation (parties who have seen the proposal and in what capacity)</p>	<p><u><i>Those who are actively participating:</i></u></p> <ul style="list-style-type: none"> ● Martin Coutts, Associate Vice-President (Finance, Procurement and Planning) ● Brian Boytang, Director (Accounting and Reporting)
<p>Approval Route (Governance) (including meeting dates)</p>	<ul style="list-style-type: none"> ● Board Finance and Property Committee (May 31, 2022) - recommendation ● Board of Governors (June 17, 2022) - approval

Strategic Alignment

<p>Alignment with <i>For the Public Good</i></p>	<p><i>For the Public Good (Sustain):</i> Sustain our people, our work, and the environment by attracting and stewarding the resources we need to deliver excellence to the benefit of all Albertans. OBJECTIVE 22: Secure and steward financial resources to sustain, enhance, promote, and facilitate the university's core mission and strategic goals. iii. Strategy: Ensure responsible and accountable stewardship of the university's resources and demonstrate to government, donors, alumni, and community members the efficient and careful use of public and donor funds.</p>			
<p>Alignment with Core Risk Area</p>	<p>Please note below the specific institutional risk(s) this proposal is addressing.</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Enrolment Management <input type="checkbox"/> Faculty and Staff <input checked="" type="checkbox"/> Funding and Resource Management <input type="checkbox"/> IT Services, Software and Hardware <input type="checkbox"/> Leadership and Change <input type="checkbox"/> Physical Infrastructure </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Relationship with Stakeholders <input type="checkbox"/> Reputation <input type="checkbox"/> Research Enterprise <input type="checkbox"/> Safety <input type="checkbox"/> Student Success </td> </tr> </table>		<input type="checkbox"/> Enrolment Management <input type="checkbox"/> Faculty and Staff <input checked="" type="checkbox"/> Funding and Resource Management <input type="checkbox"/> IT Services, Software and Hardware <input type="checkbox"/> Leadership and Change <input type="checkbox"/> Physical Infrastructure	<input type="checkbox"/> Relationship with Stakeholders <input type="checkbox"/> Reputation <input type="checkbox"/> Research Enterprise <input type="checkbox"/> Safety <input type="checkbox"/> Student Success
<input type="checkbox"/> Enrolment Management <input type="checkbox"/> Faculty and Staff <input checked="" type="checkbox"/> Funding and Resource Management <input type="checkbox"/> IT Services, Software and Hardware <input type="checkbox"/> Leadership and Change <input type="checkbox"/> Physical Infrastructure	<input type="checkbox"/> Relationship with Stakeholders <input type="checkbox"/> Reputation <input type="checkbox"/> Research Enterprise <input type="checkbox"/> Safety <input type="checkbox"/> Student Success			
<p>Legislative Compliance and jurisdiction</p>	<p>Board Finance and Property Committee Terms of Reference</p>			

Attachments: none

Prepared by:

Todd Gilchrist, Vice-President, University Services and Finance, todd.gilchrist@ualberta.ca

Governance Executive Summary
Action Item

Agenda Title	Fall 2023 International Tuition Fee Proposal for Incoming Students
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Motion

THAT the Board Finance and Property Committee, on the recommendation of the General Faculties Council Academic Planning Committee, recommend that the Board of Governors approve tuition fees for new international students for all programs, as set forth in attachment 1, to take effect for the Fall 2023 intakes.

Item

Action Requested	<input type="checkbox"/> Approval <input checked="" type="checkbox"/> Recommendation
Proposed by	Provost and Vice-President (Academic) and Vice-President (University Services and Finance)
Presenter(s)	Steven Dew, Provost and Vice-President (Academic) and Todd Gilchrist, Vice-President (University Services and Finance)

Details

Responsibility	Provost and Vice-President (Academic) and Vice-President (University Services and Finance)
The Purpose of the Proposal is <i>(please be specific)</i>	To propose tuition fees for the Fall 2023 intake of new international students, compliant with the requirements imposed by Bill 19 and associated Alberta Tuition Framework and Guidelines.
Executive Summary <i>(outline the specific item – and remember your audience)</i>	<p>In 2019, the Board of Governors, on the recommendation of APC, approved a new program-based tuition model for incoming international students. This provides students with a “guaranteed” amount of tuition over the nominal duration of their program. The new model was implemented for the Fall 2020 intake of international students.</p> <p>The multiyear nature of this model requires careful attention to anticipated inflation over the duration of the program. Tuition was not increased for the Fall 2021 intake due to the uncertainty of covid. Tuition was increased by 2% for the Fall 2022 intake. We are proposing a 6.0% increase to program-based tuition for the Fall 2023 international cohort to cover increased costs for the entire duration of the guarantee (up to 5 years for most programs) for this group.</p> <p>This proposal is based on expected higher than normal inflationary increases over the period of time students entering their programs in Fall 2023 will be in those programs and corresponding expected increase in costs. According to the Alberta Tuition Framework, international students are expected to cover the full costs of their education.</p> <p>The motion applies only to international students admitted for the Fall 2023 term. Current international students admitted prior to Fall 2020 (the first intake in the program-based model) will continue to be</p>

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	<p>assessed tuition based on their registration and are subjected to annual increases approved by the Board of Governors.</p> <p>This increase is not expected to impact the University's competitiveness internationally, based on international tuition levels at other U15 institutions and analysis of key markets for the University of Alberta. We have shared the U15 tuition comparators for Fall 2021, the most recent data available. While we don't know the details of specific international tuition proposals at peer institutions, we nonetheless anticipate that institutions across the U15 will raise their international tuition in Fall 2023, and that the 6% increase will keep the University of Alberta in approximately the middle of the U15 for international tuition rates.</p> <p>Financial aid: 7.55% of all international tuition revenue is set aside to provide financial supports to international students. This 6% increase will provide additional funds of approximately \$200,000 for financial supports in 2023-2024 (year 1 of the cohort).</p>
Supplementary Notes and context	<This section is for use by University Governance only to outline governance process.>

Engagement and Routing (Include meeting dates)

<p>Consultation and Stakeholder Participation (parties who have seen the proposal and in what capacity)</p> <p><For information on the protocol see the Governance Resources section Student Participation Protocol></p>	<p><u>Those who are actively participating:</u></p> <ul style="list-style-type: none"> ● Office of the Provost and Vice-President (Academic) ● Office of the Vice-President (University Services and Finance) ● Strategic Analysis and Data Warehouse ● Office of the Registrar ● Faculty of Graduate Studies and Research ● Office of Resource Planning ● University of Alberta International <p><u>Those who have been consulted:</u></p> <ul style="list-style-type: none"> ● Tuition Budget Advisory Committee (including representatives of the Students' Union and the Graduate Students' Association) ● Deans' Council ● President's Executive Committee ● Students' Union, Graduate Students' Association, International Students' Association, Special Consultation Sessions, May 25th and 26th, 2022
Approval Route (Governance) (including meeting dates)	<p>APC - May 18, 2022 APC (Special Meeting) - May 26, 2022 (recommendation) BFPC - May 31, 2022 (recommendation) Board of Governors - June 17, 2022 (approval)</p>

Strategic Alignment

Alignment with <i>For the Public Good</i>	Build a diverse, inclusive community of exceptional students, faculty and staff from Alberta, Canada, and the world.
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	Sustain our people, our work, and the environment by attracting and stewarding the resources we need to deliver excellence to the benefit of all.	
Alignment with Institutional Risk Indicator	Please note below the specific institutional risk(s) this proposal is addressing.	
	<input checked="" type="checkbox"/> Enrolment Management <input type="checkbox"/> Faculty and Staff <input checked="" type="checkbox"/> Funding and Resource Management <input type="checkbox"/> IT Services, Software and Hardware <input type="checkbox"/> Leadership and Change <input type="checkbox"/> Physical Infrastructure	<input type="checkbox"/> Relationship with Stakeholders <input type="checkbox"/> Reputation <input type="checkbox"/> Research Enterprise <input type="checkbox"/> Safety <input type="checkbox"/> Student Success
Legislative Compliance and jurisdiction	<i>Post-Secondary Learning Act of Alberta</i> APC Terms of Reference BFPC Terms of Reference Section 2k	

Attachments

1. Proposed Tuition Rates for Incoming International Student 2023/2024 (5 pages)
2. International Tuition Inflationary Scenarios (2 pages)
3. International Tuition Cohort Overview (1 page)
4. U15 Tuition Comparators (3 pages)

Prepared by: Kathleen Brough, Chief of Staff, Office of the Provost and Vice-President (Academic)

Proposed Tuition Rates for Incoming International Student 2023/24

Attachment 1

1. Undergraduate Program Based Tuition Bands

International Undergraduate Cohort	2022-2023 Program Total	2023-2024 Program Total	Percent change	Credits
Faculty of Engineering Degree Programs*	Program Total \$161,160 Annual Rate \$40,290	Program Total \$170,830 Annual Rate \$42,707	6.00%	Varies*
Faculty of Business Degree Programs (As of Fall 2022, this is a 4 year program)	Program Total \$142,800 Annual Rate \$35,700	Program Total \$151,368 Annual Rate \$37,842	6.00%	120
Degree Programs in: Faculty of Arts, Faculty of Agricultural Life and Environmental Sciences, Faculty of Kinesiology Sport and Recreation, Faculty of Science, Faculty of Open Studies	Program Total \$120,360 Annual Rate \$30,090	Program Total \$127,582 Annual Rate \$31,895	6.00%	120
Degree Programs in: Augustana Faculty, Faculte Saint Jean, Faculty of Education, Faculty of Native Studies, Faculty of Nursing	Program Total \$110,160 Annual Rate \$27,540	Program Total \$116,770 Annual Rate \$29,192	6.00%	120
BSc in Radiation Therapy	Program Total \$150,449.92 Annual Rate \$37,612.48	Program Total \$159,476.92 Annual Rate \$39,869.22	6.00%	150
BSc in Medical Laboratory Science (3 years)	Program Total \$94,278.24 Annual Rate	Program Total \$99,934.93 Annual Rate	6.00%	94

Proposed Tuition Rates for Incoming International Student 2023/24

	\$31,426.08	\$33,311.64		
Doctor of Pharmacy (Pharm D) (4 yrs)	Program Total \$204,000 Annual Rate \$51,000	Program Total \$216,240 Annual Rate \$54,060	6.00%	141
Juris Doctors (JD) Program (3 yrs)	Program Total \$144,781.68 Annual Rate \$48,260.56	Program Total \$153,468.58 Annual Rate \$51,156.19	6.00%	92
Doctor of Dental Surgery (4 yrs)	Program Total \$364,186.56 Annual Rate \$91,046.64	Program Total \$386,037.75 Annual Rate \$96,509.44	6.00%	214
Bachelor of Science in Dental Hygiene (3 yrs)	Program Total \$104,008.20 Annual Rate \$34,669.40	Program Total \$110,248.69 Annual Rate \$36,749.56	6.00%	99.5

Notes:

*Engineering programs vary slightly in credits pending students' choice in registrations.

**Undergraduate Certificate rates, unless otherwise stated, will be prorated based on the Undergraduate Faculty rate

***Course loads may change and Tuition Rates will always be prorated based on the approved rate.

2. Tuition for Specific Undergraduate Programs or courses not covered by the standard Undergraduate grid.

International Undergraduate Cohort	2022-2023 Payment Per Course(Indexed to 3 units of course weight)	2023-2024 Payment Per Course(Indexed to 3 units of course weight)	Percent change
English Language School – All courses taken by Undergraduate or Graduate Students (includes Bridging Program)	\$3,009	\$3,189.54	6.00%

Proposed Tuition Rates for Incoming International Student 2023/24

Rehabilitation Medicine – Undergraduate Special and Visiting Students only	\$3,009	\$3,190	6.00%
Medicine and Dentistry – Undergraduate Special and Visiting Students only	\$3,009	\$3,190	6.00%

3. Centre collégial de l'Alberta

International College	2022-2023 Program Total	2023-2024 Program Total	Percent change	Credit
Centre collégial de l'Alberta – Diploma (2 yrs)	Program Total \$25,500 Annual Rate \$12,750	Program Total \$27,030 Annual Rate \$13,515	6.00%	60
Centre collégial de l'Alberta – Certificate (1 yrs)	Program Total \$12,750 Annual Rate \$12,750	Program Total \$13,515 Annual Rate \$13,515	6.00%	30

4. Thesis based tuition for PhD and Masters Programs

2021-22 International Graduate Cohort	2022-2023	2023-2024	Percent change
Thesis Based Masters (All Specializations) - 4 Years	Program Total \$35,496 Annual Rate \$8874	Program Total \$37,626 Annual Rate \$9,406	6.00%
PhD (All Specializations) - 6 Years	Program Total \$53,244 Annual Rate \$8874	Program Total \$56,439 Annual Rate \$9,406	6.00%
All Programs – International Graduate Tuition Increases (offset by equivalent financial support)	\$4,000	\$4,000	0%

Proposed Tuition Rates for Incoming International Student 2023/24

5. Standard International Graduate Course Based rates

2021-22 International Graduate Cohort	2022-2023 Per 3 Credits	2023-2024 Per 3 Credits	Percent change
Standard Course Based Master's or Graduate Certificates	\$1,901.52	\$2,015.58	6.00%
All Course Based Master Programs – International Graduate Tuition Increase (offset by equivalent financial support)	\$4,000	\$4,000	0%

Notes:

* Includes most Master and Certificate programs and excludes non-standard rates described below

6. Non-Standard International Graduate Course Based Rates (includes Master and Certificate Programs)

Per Course Rate	2022-2023 Per 3 credit Course Rate	2023-2024 Per 3 credit Course Rate	Percent change
Master of Science – Integrated Petroleum Geosciences (Course Based)	\$3,161.22	\$3,350.89	6.00%
Master of Science in Internetworking	\$2,244.00	\$5337.69	6.00%
Master of Science Specialization Program in Multimedia, Post-Baccalaureate Certificate in Indigenous Sport and Recreation, Post-Baccalaureate in	\$2,040.00	\$2,162.40	6.00%

Proposed Tuition Rates for Incoming International Student 2023/24

Sports and Recreation Management			
Master of Accounting	\$4,284.00	\$4,541.04	6.00%

7. Non-Standard International Graduate Program Rates

2021-22 International Graduate Cohort	2022-2023 Program Total	2023-2024 Program Total	Percent change
Master's in Engineering (All Specializations)	\$40,290.00	\$42,707.40	6.00%
Master's in Business Administration	\$57,694.40	\$61,156.06	6.00%
Executive Master of Business Administration	\$68,340.00	\$72,440.40	6.00%
Master of Business Administration – Fort McMurray	\$45,900.00	\$48,654	6.00%
Master of Science in Orthodontics, Master of Science in Periodontology	\$16,448.80	\$17,435.73	6.00%
Doctor of Philosophy in Orthodontics, Doctor of Philosophy in Periodontology	\$11,385.64	\$12,068.78	6.00%

Effect of Inflation on Multiyear Cost Projections

	Inflation	2022-23	2023-24	2024-25	2025-26	2026-27	4yr Total	Average	Increase
Fall 2022 Intake	2%	100.0	102.0	104.0	106.1	-	412.16	103.04	-
Fall 2023 Intake	2%	-	102.0	104.0	106.1	108.2	420.40	105.10	2.00%
	3%	-	103.0	106.1	109.3	112.6	430.91	107.73	4.55%
	4%	-	104.0	108.2	112.5	117.0	441.63	110.41	7.15%
	5%	-	105.0	110.3	115.8	121.6	452.56	113.14	9.80%

Different Scenarios (Varying Inflation)

	case	2022-23	2023-24	2024-25	2025-26	2026-27	4yr Total	Average	Increase
Fall 2022 Intake	baseline	100	2.0%	2.0%	2.0%	-	412.16	103.04	-
Fall 2023 Intake	base	100	2.0%	2.0%	2.0%	2.0%	420.40	105.10	2.0%
	low	100	4.0%	3.0%	2.5%	2.0%	432.91	108.23	5.0%
	med	100	5.0%	3.0%	2.5%	2.0%	437.07	109.27	6.0%
	high	100	5.0%	4.0%	2.5%	2.0%	440.30	110.07	6.8%

Canada CPI in Feb. 2022 was 5.7%

<https://www150.statcan.gc.ca/n1/daily-quotidien/220316/dq220316a-eng.htm>

**International Tuition Cohort Overview
Undergraduate Example - Arts and Science**

	2019	2020	2021	2022	2023	2024	2025	2026	2027
Registration Based Model*	\$22,267.20	\$23,156.40 (+4%)	\$24,081.60 (+4%)	\$25,044 (+4%)	Not Approved Yet	Course Rate***	Course Rate***	Course Rate***	Course Rate***
2020 Cohort**		\$29,500	\$29,500	\$29,500	\$29,500	Bonus Year	Course Rate***	Course rate***	Course Rate***
2021 Cohort**			\$29,500 (no change from 2020)	\$29,500	\$29,500	\$29,500	Bonus Year	Course Rate***	Course Rate***
2022 Cohort**				\$30,090 (+2% on total from 2021 cohort)	\$30,090	\$30,090	\$30,090	Bonus Year	Course Rate***

*Students admitted to the University of Alberta prior to 2020 remain on a registration based tuition model until 2024. The amount shown in the table represents what a student in a general arts and science program will pay for 10 courses.

**Arts and Science rate

***If a student is still taking courses after their guaranteed time frame (generally 4 years plus 1), they will pay for courses at the approved course based rate for that year.

A Detailed FAQ related to the University of Alberta tuition model for International students can be found [here](#).

U15 International and Domestic Tuition and Fees, 2021-22

As shown in Table 1, U of A's international undergraduate tuition is \$29,500 (or \$30,328 when MNIFs are considered) for the Fall 2021 intake, although the rate is still slightly lower than the U15 average.

U of A's international tuition for the M.A. program is higher than only three institutions, namely Calgary, Manitoba, and Saskatchewan.

When MNIFs are included, U of A's international tuition & fee for the M.A. program is higher than UBC and the three institutions noted above.

Overall, the U of A's international tuition (and fees) at the M.A. level is considerably lower than the U15 average, whereas at the PhD level, the gap is smaller.

Table 1. International Tuition for BA, MA, & PhD, 2021-2022

2021-22 Tuition	International								
	Arts & Social Science Undergraduate			MA			PhD		
	<i>Tuition</i>	<i>MNIFs retained by Institution</i>	<i>Total</i>	<i>Tuition</i>	<i>MNIFs retained by Institution</i>	<i>Total</i>	<i>Tuition</i>	<i>MNIFs retained by Institution</i>	<i>Total</i>
University of Alberta	\$ 29,500	\$ 828	\$ 30,328	\$ 8,700	\$ 1,021	\$ 9,721	\$ 8,700	\$ 1,021	\$ 9,721
Dalhousie University	\$ 23,286	\$ 1,451	\$ 24,737	\$ 16,014	\$ 1,716	\$ 17,730	\$ 6,519	\$ 1,716	\$ 8,235
McMaster University	\$ 37,237	\$ 687	\$ 37,923	\$ 17,096	\$ 271	\$ 17,368	\$ 6,307	\$ 271	\$ 6,579
Queen's University	\$ 50,926	\$ 568	\$ 51,494	\$ 12,927	\$ 377	\$ 13,304	\$ 12,927	\$ 377	\$ 13,304
University of British Columbia	\$ 41,156	\$ 275	\$ 41,431	\$ 9,131	\$ 235	\$ 9,367	\$ 9,131	\$ 235	\$ 9,367
University of Calgary	\$ 22,189	\$ 719	\$ 22,908	\$ 8,081	\$ 521	\$ 8,602	\$ 8,081	\$ 521	\$ 8,602
University of Manitoba	\$ 16,620	\$ 544	\$ 17,164	\$ 7,133	\$ 650	\$ 7,783	\$ 3,808	\$ 650	\$ 4,458
University of Ottawa	\$ 36,161	\$ 325	\$ 36,486	\$ 25,472	\$ 304	\$ 25,776	\$ 6,367	\$ 304	\$ 6,671
University of Saskatchewan	\$ 20,130	\$ 283	\$ 20,413	\$ 8,096	\$ 338	\$ 8,435	\$ 8,096	\$ 338	\$ 8,435
University of Toronto	\$ 58,160	\$ 1,033	\$ 59,193	\$ 26,210	\$ 1,033	\$ 27,243	\$ 6,210	\$ 1,033	\$ 7,243
University of Waterloo	\$ 42,520	\$ 469	\$ 42,989	\$ 22,416	\$ 598	\$ 23,014	\$ 22,188	\$ 598	\$ 22,786
Western University	\$ 36,208	\$ 513	\$ 36,721	\$ 18,984	\$ 541	\$ 19,525	\$ 6,360	\$ 541	\$ 6,901
McGill University	\$ 26,500	\$ 1,360	\$ 27,860	\$ 18,662	\$ 1,281	\$ 19,943	\$ 16,751	\$ 1,281	\$ 18,032
Universite de Montreal	\$ 24,608	\$ 1,104	\$ 25,712	\$ 27,993	\$ 1,661	\$ 29,654	\$ 25,126	\$ 1,660	\$ 26,786
Universite Laval	\$ 19,916	\$ 718	\$ 20,634	\$ 15,933	\$ 718	\$ 16,651	\$ 20,101	\$ 874	\$ 20,975
AVERAGE (Excluding U of A)	\$ 32,544	\$ 718	\$ 33,262	\$ 16,725	\$ 732	\$ 17,457	\$ 11,284	\$ 743	\$ 12,027

Sources:

U15 2021-2022 Tuition & Fees results

Institutions' tuition & fees websites

As shown in Table 2, domestic undergraduate tuition at the U of A is the sixth lowest in the country, approximately 9% lower than the U15 average.

When MNIFs are included, the U of A becomes the seventh lowest in the country, about 6% lower than the U15 average.

Domestic graduate tuition is substantially lower than the U15 average. Approximately 37% below the U15 average at the masters level (or 28% when MNIFs are included) and 18% below the U15 average at the PhD level (or 9% when MNIFs are included).

Table 2. Domestic Tuition for BA, MA, & PhD, 2021-2022

2021-22 Tuition	Domestic								
	Arts & Social Science			MA			PhD		
	<i>Tuition</i>	<i>MNIFs retained by Institution</i>	<i>Total</i>	<i>Tuition</i>	<i>MNIFs retained by Institution</i>	<i>Total</i>	<i>Tuition</i>	<i>MNIFs retained by Institution</i>	<i>Total</i>
University of Alberta	\$ 6,091	\$ 828	\$ 6,919	\$ 4,193	\$ 1,021	\$ 5,214	\$ 4,193	\$ 1,021	\$ 5,214
Dalhousie University	\$ 8,346	\$ 710	\$ 9,056	\$ 8,835	\$ 975	\$ 9,810	\$ 6,519	\$ 975	\$ 7,494
McMaster University	\$ 6,224	\$ 687	\$ 6,910	\$ 6,307	\$ 271	\$ 6,579	\$ 6,307	\$ 271	\$ 6,579
Queen's University	\$ 6,083	\$ 568	\$ 6,651	\$ 5,773	\$ 377	\$ 6,150	\$ 5,773	\$ 377	\$ 6,150
University of British Columbia	\$ 5,617	\$ 275	\$ 5,892	\$ 5,198	\$ 235	\$ 5,433	\$ 5,198	\$ 235	\$ 5,433
University of Calgary	\$ 6,166	\$ 719	\$ 6,885	\$ 3,464	\$ 521	\$ 3,985	\$ 3,464	\$ 521	\$ 3,985
University of Manitoba	\$ 4,352	\$ 544	\$ 4,895	\$ 3,808	\$ 650	\$ 4,458	\$ 3,808	\$ 650	\$ 4,458
University of Ottawa	\$ 6,088	\$ 325	\$ 6,413	\$ 7,370	\$ 304	\$ 7,675	\$ 6,367	\$ 304	\$ 6,671
University of Saskatchewan	\$ 6,710	\$ 283	\$ 6,993	\$ 4,473	\$ 338	\$ 4,811	\$ 4,473	\$ 338	\$ 4,811
University of Toronto	\$ 6,100	\$ 1,033	\$ 7,133	\$ 6,210	\$ 1,033	\$ 7,243	\$ 6,210	\$ 1,033	\$ 7,243
University of Waterloo	\$ 6,128	\$ 469	\$ 6,597	\$ 6,762	\$ 598	\$ 7,360	\$ 6,762	\$ 598	\$ 7,360
Western University	\$ 6,050	\$ 513	\$ 6,563	\$ 6,360	\$ 541	\$ 6,901	\$ 6,360	\$ 541	\$ 6,901
McGill University	\$ 8,506	\$ 1,360	\$ 9,866	\$ 8,506	\$ 1,281	\$ 9,787	\$ 2,725	\$ 1,281	\$ 4,006
Universite de Montreal	\$ 8,506	\$ 1,104	\$ 9,610	\$ 12,758	\$ 1,661	\$ 14,419	\$ 4,088	\$ 1,660	\$ 5,748
Universite Laval	\$ 8,506	\$ 718	\$ 9,224	\$ 6,804	\$ 718	\$ 7,523	\$ 3,270	\$ 874	\$ 4,145
AVERAGE (Excluding U of A)	\$ 6,670	\$ 665	\$ 7,335	\$ 6,616	\$ 679	\$ 7,295	\$ 5,095	\$ 690	\$ 5,785

Sources:

U15 2021-2022 Tuition & Fees results

Institutions' tuition & fees websites

NOTES:

McGill University, Laval University, and U de Montreal domestic tuition, and McMaster University domestic undergraduate tuition, is for out-of-province students.

Undergraduate data are for an Arts & Social Science program, except for U of British Columbia, which is from an Arts program. Data for UBC's Arts & Social Science program are unavailable in the U15 report.

U of Saskatchewan & U of Calgary Arts & Social Science International Tuition was taken from the university website.

U of Manitoba tuition amounts are obtained from the U15 report, because of differing values on the university website.

Graduate tuition is for the first year of an MA/PhD program. Laval University (Masters only), McGill University, and U of Toronto are for two semesters. All other institutions and programs are for three semesters.

Dalhousie University, McMaster University, U of Manitoba, U of Ottawa, U of Toronto, and Western University do not have an international tuition differential for the PhD program.

Dalhousie University PhD tuition is \$6,519 for the majority of programs, but a PhD in Arts and Social Science is \$4,395.

U de Montreal has changed reporting for graduate programs (both domestic and international) from 24 credits to 3 terms, which is considered 45 credits.

The MNIFs for all institutions were obtained from the U15 report. Validation against institution websites were conducted on a best-attempt basis, as fees between institutions are not always consistent or the websites are not clear on which fees are included.

U of Ottawa's and Dalhousie University's MNIFs numbers have been adjusted to reflect two terms (undergraduate) or three terms (graduate), as in the U15 report they only reported for one term.

MNIFs generally include Athletics, College/Faculty Activity Fees, General Student Service Fee, Health Service, and Other Fees.

The University of Alberta's calculations for "MNIFs retained by Institution" are based on two (undergraduate) or three (graduate) terms of study.

Laval University has a declining graduate tuition structure, which charges continuing fees after the first 2 sessions, for both domestic and international MA and PhD students.

McGill University has a declining graduate tuition structure, which offers a different rate for additional sessions, for both domestic and international MA and PhD students.

U of Manitoba has a declining graduate tuition structure, which charges 1 term of graduate tuition then continuing fees, for both domestic and international MA and PhD students.

U de Montreal has a declining graduate tuition structure, which offers a different rate during the thesis portion of the graduate program, for both domestic and international MA and PhD students.

Dalhousie University has declining tuition at the MA level, after the first three semesters, for both international and domestic students.

At UBC, domestic graduate students are only placed on the declining tuition schedule if they have not finished their programs within a defined period of time.

U of Ottawa offers an International Differential Exemption for those MA students enrolled in a French or French-immersion program, which amounts to approximately \$15,000 for three terms.