

PROGRAM GUIDE

INTRODUCTION

The Campus Alberta Small Business Engagement “CASBE Program” is a pilot funding program at Alberta Innovates to leverage the Natural Sciences and Engineering Research Council “NSERC” efforts through the Engage program. Alberta Innovates is interested in incentivizing academics and small businesses in Alberta to collaborate more and take advantage of NSERC Engage Grants. The CASBE Program aims to facilitate academics to use their world-class knowledge, facilities and students at colleges, polytechnics and universities within [Campus Alberta](#) to assist Small and Medium Enterprises “SME” in Alberta (**Micro Nano Technology “MNT”** project).

NSERC created the Engage program to foster the development of new research partnerships by supporting short-term research and development projects aimed at addressing a company-specific problem. The mutually beneficial projects are expected to result in economic benefits to the company and to Canada and build impactful longer term collaborations between the applicant and the company. NSERC has been working with Canadian Provinces to build funding opportunities that facilitate industrial-academic collaboration. This program is the first time that Alberta is launching a joint Provincial/Federal initiative to address this goal for Alberta academics and businesses interested in Engage Grants.

This pilot program was launched by Alberta Innovates at the end of October 2016 and it was very successful so the program will continue during 2017-18. Academics will use world-class knowledge, facilities and students within Campus Alberta to help small businesses to close knowledge gaps identified during their technology development. By taking advantage of this program, Alberta SMEs should reduce time to innovate (MNT project).

The Alberta Innovates-NSERC collaboration will allow Alberta small businesses to work collaboratively with academics for one year in a MNT project instead of 6 months originally established by NSERC Engage. Alberta Innovates will contribute \$25,000 in addition to the \$25,000 originally provided by NSERC Engage making the total investment per project \$50,000. Alberta Innovates and NSERC’s grants will flow to the academic institution to cover project expenses.

The CASBE Program’s projects should clearly fall within the MNT domain. A fundamental aspect of the MNT domain is typically seen in manufacturing devices or products at the scale of micro and nano length. As a rule, this involves the ability to control the process on the micro and nanometer scale. More specifically, nanotechnology is the understanding and control of matter at dimensions of the order of 1 to 100 nanometers. Encompassing nanoscale science, engineering and technology, nanotechnology involves imaging, measuring, modeling, and manipulating matter at this length scale to enable novel applications. With particular reference to topics at the interface of nanotechnology and the life sciences, studies that use tools and concepts to study biology at the nanoscale; that propose to engineer biological molecules toward functions different from those they have in nature; or that manipulate biological systems by methods other than traditional molecular biological, synthetic chemical, or biochemical approaches, are classified as nanotechnology projects.



Proposals addressing any of the Alberta Strategic Priority Areas enunciated by the Government of Alberta and summarized in Table 1 shown below will have priority.

Table 1.

Alberta Strategic Priority Areas	Innovation Target Priority Areas
	Select Focus Areas (examples only)
Emerging Technologies	<ul style="list-style-type: none"> • Clean power/renewables • Advanced sensors and MEMS devices • Waste management • Robotics/3D printing • New material development
Environment & Climate	<ul style="list-style-type: none"> • Cumulative effects management • Monitoring systems • Fine tailings reclamation • Aquatic ecosystem management • Water quality
Energy	<ul style="list-style-type: none"> • Carbon reduction and re-use solutions for industry • Value add process innovation • Energy storage • Renewables • Access for remote communities/first nations
Food and Agriculture	<ul style="list-style-type: none"> • Value add products and processing • Food safety • Genomic improvements • Animal welfare • Consumer preferences
Fibre and Bioindustrial	<ul style="list-style-type: none"> • Value from waste (Agriculture, Forestry and municipal) • Biorefining technologies • Advanced biomaterials and fibre innovation
Health	<ul style="list-style-type: none"> • Personalized medicine • Care innovation across the spectrum of delivery • Novel diagnostics and therapeutics
Micro nanotechnology applications (MNT)	
Opportunity Areas	
<ul style="list-style-type: none"> • Advanced Nano engineered materials <ul style="list-style-type: none"> • Sensors • Atomic & molecular systems 	

1. PROGRAM OVERVIEW

The CASBE Program allows academics to use their world-class knowledge, facilities and students at colleges and universities within Campus Alberta to help SMEs to close knowledge gaps identified during the business’s technology development (MNT project). The CASBE Program supports Alberta academic-small business collaboration. It extends NSERC Engage project from 6 months to up to 12 months in duration with a \$50,000 budget. Alberta Innovates and NSERC are collaborating to create a streamlined, single application process through the NSERC Engage portal.

	<p>NSERC Engage for Colleges</p> <p>NSERC Engage for Colleges is intended to give a company that operates from a Canadian base access to the knowledge and expertise available at a Canadian college. The grant supports first-time collaboration between a college and a company for an R&D project of one year to solve a company-specific problem.</p>
	<p>NSERC Engage for Universities</p> <p>NSERC Engage for Universities is intended to give a company that operates from a Canadian base access to the knowledge and expertise available at Canadian universities. The grant supports first-time collaboration between an academic researcher and a company for an R&D project of up to one year to solve a company-specific problem.</p>

2. DESIRED IMPACT

Below the impact for the different stakeholders are listed:

- a) **For academia:**
 1. Accessed exciting research challenges that companies are facing during technology development
 2. Established relationships with industry that could open new sources of funding from NSERC and Alberta Innovates
- b) **For students:**
 1. Leveraged knowledge and innovative ideas to solve industry problems in Alberta
 2. Gained real-world experience
 3. Built relationships with established companies in Alberta
 4. Gained access to NSERC’s and Alberta Innovates’ industry and entrepreneurial networks
 5. Gained access to Provincial and Federal grants to gain employment in Alberta
- c) **For small businesses:**
 1. Gained access to new talent
 2. Identified prospective employees and opportunities to apply for Federal and Provincial grants to hire new employees in Alberta
 3. Increased productivity, revenue and jobs
 4. Developed relationships with researchers to extend company’s research & development (R&D)
 5. Gained access to unique facilities and research equipment available in academic institutions
 6. Created marketable solutions to current end users’ (large companies, local government, Federal government, etc.) challenges
- d) **For Alberta:**
 1. Shortened business innovation cycle for Alberta SMEs
 2. Increased revenues in the Alberta business sector
 3. Increased technology-based jobs in Alberta

3. FUNDING STRUCTURE

The maximum Alberta Innovates investment is \$25,000 to support academic research costs. The NSERC Engage investment is \$25,000 and supports academic costs as well. Both contributions are provided to the academic

Campus Alberta Small Business Engagement Program
(Aligned to Micro nanotechnology (MNT) activity)



institution.

Organization	Alberta Innovates	NSERC
Max investment	\$25,000 (1 year project)	\$25,000 (1 year project)
Industry matching	In kind at a minimum	In kind at a minimum
Alberta Strategic Priority Areas	Emergent technologies, Environment and Climate, Energy, Food and Agriculture, Fibre and Bio-industrial and Health	Emergent technologies, Environment and Climate, Energy, Food and Agriculture, Fibre and Bio-industrial and Health
Technology platform	Micro nanotechnology (MNT)	Micro nanotechnology (MNT)
Overhead	0%	0% Universities and 20% for Colleges

NOTE: NSERC will release the funds to the academic institution at the beginning of the project.

Alberta Innovates will release the funds to the academic institution at the end of the one year project. **Academics and company representatives have to demonstrate that the first six months of the project have been successful** (Mid project milestone should include a joint presentation to Alberta Innovates)

4. ELIGIBILITY

Eligibility follows [NSERC's eligibility criteria](#) with the addition that the **CASBE Program is only available to Alberta academics helping Alberta SMEs developing solutions (Micro Nanotechnology project)**

- a) The project is related to solving the industry challenge identified by an Alberta SME developing MNT products. All IP will belong to the SME.
- b) The NSERC-eligible University- or College-based applicant must be part of Campus Alberta, and is expected to prepare a one year project plan containing detailed technology transfer activities.
- c) A joint presentation of results to Alberta Innovates is required after six months. Successful collaboration should be demonstrated at this time for the project to continue
- d) The company must be a for-profit company in Alberta creating a MNT-based product, have a minimum of two full-time employees, be in operation for a minimum of two years, and be in good financial and reporting standing with Alberta Innovates.
- e) The project will support a new collaboration:
 - 1. College-based applicants: No existing or past association between the college and the industry partner is permitted.
Evidence of an established relationship between the college and industry partner includes:
 - 1) previous research collaboration between the college and the company or any of its divisions;
 - 2) a consulting contract in excess of a few days;
 - 3) involvement of a member of the college research team with the company; and
 - 4) participation of a company employee on the Board of Directors [or equivalent] of the college.
 - 2. University-based applicants: No existing or past association between the researcher and the industry partner is permitted.
Evidence of an established relationship between the researcher and industry partner includes:
 - 1) Previous research collaboration between the researcher and the company or any of its divisions or parent;
 - 2) researcher's current or past involvement in the company;
 - 3) joint participation in a research network;
 - 4) researcher's existing association with the company or its principals, including (1) whether the company principals or staff serve as a professor, adjunct professor or other colleague in the same university department as the applicant, or (2) in the case

- of a small company, whether a former trainee of the applicant now holds a key position in the company;
- 5) past or current supervision of a graduate student who is supported by an industrial scholarship or internship with the proposed partner; and
- 6) other evidence that an Engage Grant is not needed to foster a new research collaboration
- f) Participation of collaborating researchers or co-applicants is not permitted.

Eligible Expenses:

Please refer to the full [NSERC Engage guidelines](#) for expense eligibility criteria.

5. EVALUATION AND ASSESSMENT

- a) Simultaneous review of the R&D proposal will be done by Alberta Innovates and NSERC.
- b) The corresponding R&D proposal should be for a one-year project and must include clear technology transfer activities between the academic institution and the SME.
- c) This program will leverage NSERC’s [selection criteria](#) for approval.
- d) The industry partner should not have an outstanding balance or otherwise owe money to any Alberta Innovates organization, subsidiary or partner.**
- e) In order for a project to be awarded funding through the CASBE Program, there must be a unanimous decision by both Alberta Innovates and NSERC to support the project.
- f) Final decision notification will be provided by an Alberta Innovates and NSERC joint letter.
- g) The NSERC Engage and Alberta Innovates CASBE Program’s grant agreements will be set up separately with the academic institution to facilitate financial accountability.
- h) The first six months of the project must be successful in order to receive Alberta Innovates CASBE Program funds. A project evaluation meeting with the participation of Alberta Innovates will be held after the first six months. If at the end of the first six months, the collaboration between the academic and the company has not been successfully developed, the project will end and Alberta Innovates will not flow CASBE Program’s investment to the academic institution. Information contained in the academic and company project reports and impact surveys collected by NSERC will be used to inform Alberta Innovates about CASBE Program’s performance measures. Alberta Innovates may send a separate survey as well.

6. PROGRAM MEASURES :

The main performance measures for the CASBE Program include:

- a) Outcome: Increase in R&D activity within and between Alberta SMEs and Campus Alberta
Measure: Reported increase in R&D investment
- b) Outcome: Increase in knowledge transferred to the Alberta SME
Measure: Enhanced skill and knowledge base of the organization; impact on products and/or services; impact on processes and/or practices; and impact on productivity
- c) Outcome: Increase in HQP industrial/business experience
Measures: HQP gained experience and technical skills relevant to the SME, HQP more job ready for employment in the SME that they would have otherwise been
- d) Outcome: Increase in SMEs hiring HQP from Campus Alberta
Measure: SME hiring any of the HQP involved in the CASBE project or from academia because of the project
- e) Outcomes: Increase in Commercialization outcomes

Measure: Type of impacts on products and/or services (new products, improved products, new services, improved service, etc.

7. HOW TO APPLY

For academics and small businesses in Alberta interested in applying to the CASBE Program, the applicant must complete the **CASBE Program form** downloadable from Alberta Innovates website (to indicate interest in the Provincial leverage) and include it as part of the NSERC Engage application form in the “Other Documents” section. When completing the Form 101, list CASBE Program as a supporting organization under the contributions from supporting organizations. Include the requested contribution from CASBE Program (up to \$25,000). The proposed expenditures and budget justification should address the total project of up to \$25,000 from CASBE Program and up to \$25,000 from NSERC.

- a) If you are interested in applying to the CASBE Program but do not have a partner, please complete a [partner request form](#) and submit it by email to marlene.huerta@albertainnovates.ca and irene.mikawoz@nserc-crsng.gc.ca. Alberta Innovates and NSERC will use their networks to find an appropriate partner for you. Once the appropriate partner has been identified, Alberta Innovates and NSERC will facilitate the first meeting.
- b) Final application to this program should be submitted by the academic institution through the [NSERC Engage](#) portal. **The CASBE Program form** can be downloaded from the Alberta Innovates webpage and must be included in the NSERC Engage application as indicated above.
- c) The applicant must include budget, milestones and deliverables, and provide a work plan for the entire period reflecting a twelve month project under the budget justification section.
- d) The proposal must identify how the company will be involved in the project. It must also identify how the university (specifically the principal investigator) or college research team and the company's scientific/technical staff will work together to ensure that the knowledge/technology will be transferred effectively to the company. Any plans for longer term, continued collaboration must also be outlined in the proposal.
- e) After Alberta Innovates and NSERC complete the proposal evaluation, the applicant, academic institution and industry partner will receive a joint notification of decision. For successful applicants, the terms and conditions of the NSERC Engage will reflect the twelve months of the project. A complementary agreement from Alberta Innovates will flow to the academic institution at the end of the project if the collaboration has been developed successfully during the first six months of the project.
- f) A copy of the final technical report submitted to the SME must be submitted to Alberta Innovates at the end of the project.
- g) Financial reports corresponding to the grant agreement from the academic institution must be submitted separately to NSERC and to Alberta Innovates.
- h) NSERC project reports must be filled out and submitted to NSERC. The information collected at the end of the project through these surveys will inform Alberta Innovates and NSERC about the performance measures necessary to evaluate the success of the CASBE Program.

This is an open call program.

This Pilot program will continue during 2017-18 (15 applications will be approved before 31 March 2018).

Campus Alberta Small Business Engagement Program

(Aligned to Micro nanotechnology (MNT) activity)



For more information on the Campus Alberta Small Business Engagement Program, please contact:

Marlene Huerta, PhD
Marlene.Huerta@albertainnovates.ca
Principal Business Advisor
Telephone 780-450-5034
Alberta Innovates
Alberta, Edmonton, AB

Michelle Rivard
Michelle.Rivard@albertainnovates.ca
Senior Program Associate
Telephone 780-450-5583
Alberta Innovates
Alberta, Edmonton, AB

Irene R. Mikawoz, P.Eng.
Irene.Mikawoz@nserc-crsng.gc.ca
NSERC Manager | Gestionnaire
Prairies Regional Office
Telephone 204-984-6300
Natural Sciences and Engineering Research Council of Canada
Government of Canada