UNIVERSITY COUNCIL
ACADEMIC PROGRAMS COMMITTEE
REQUEST FOR DECISION

PRESENTED BY: Susan Detmer, Chair, Academic Programs Committee

DATE OF MEETING: May 20, 2021

SUBJECT: Graduate Degree-level Certificate in Climate Change Vulnerability Assessment and Adaptation Action

DECISIONS REQUESTED:
It is recommended:
That Council approve the graduate degree-level Certificate in Climate Change Vulnerability Assessment and Adaptation Action, effective May 2022.

PURPOSE:
University Council has the authority to approve degree-level program.

CONTEXT AND BACKGROUND:
The College of Graduate and Postdoctoral Studies proposes a new graduate degree-level certificate in Climate Change Vulnerability Assessment and Adaptation Action (CCVAAA). The 9 credit unit certificate program will be aimed at working professionals and will provided them with an understanding of the relationship among climate science, vulnerability assessment, adaptation development, and management applications. Graduates of the program will support translation of this understanding by government agencies, private companies, and community planners into specific climate adaptation plans.

This program will be unique in Canada and will target students currently working as government employees, policy analysts/makers, urban planners/managers, and those working in the private sector and in industry. The program will be open to students from any disciplinary background and will serve as a stand-alone program targeted at professionals. The program will not be able to be used to ladder into further graduate study at this time.

The unit proposing the program has consulted both internally at USask as well as with industry and government partners to identify a need for this type of program.
CONSULTATION:

The academic programs committee reviewed the proposal for this program at its April 15, 2021 meeting. The committee was impressed with the broad consultation and the clear and detailed proposal.

This program was also reviewed and approved by the CGPS Programs committee on March 1, 2021 and by the CGPS Executive Committee on March 18, 2021.

ATTACHMENTS:

1. Proposal for Graduate degree-level Certificate in Climate Change Vulnerability Assessment and Adaptation Action
MEMORANDUM

To: Academic Programs Committee of University Council

Copy: Karsten Liber, Executive Director, School of Environment and Sustainability

From: Office of the Associate Dean, College of Graduate and Postdoctoral Studies

Date: April 7, 2021

Re: New Graduate Certificate in Climate Change Vulnerability Assessment and Adaption Action

On March 1, 2021, the Graduate Programs Committee reviewed a proposal for a new graduate certificate in Climate Change Vulnerability Assessment and Adaption Action. Committee members appreciated the curriculum mapping provided in the proposal. The courses required for the certificate have been approved through the University Course Challenge process as they may serve as electives for other programming.

It was noted that the tuition proposed was $500/credit unit, or $1500/class. It was suggested that the proposed tuition seemed high comparative to other UofS programming. It was suggested that the target market for the new certificate would be working practitioners – individuals that would be employed while earning the certificate. It was suggested that the working professionals may have access to professional development funds to assist with tuition costs. It seemed that the minimum enrolment required eight students for the programming to be delivered.

Overall, the proposal seemed well thought out.

The Graduate Programs Committee passed the following motion on March 1, 2020:

To recommend approval for the Graduate Certificate in Climate Change Vulnerability Assessment and Adaption Action subject to the course approvals. Chibbar/Morrison CARRIED 1 abstention

The same motion was subsequently passed by the CGPS Executive Committee on March 18, 2021.

Attached please find the full proposal with the Notice of Intent and Consultation with the Registrar documents.

If you have any questions, please contact Kelly Clement at kelly.clement@usask.ca

:kc
MEMORANDUM

To: Graduate Programs Committee (GPC)

From: Debby Burshtyn, Chair - Executive Committee

Date: March 18, 2021

Re: 1) Graduate Certificate in Climate Change Vulnerability Assessment and Adaption Action
2) Proposed change to the requirements for the Graduate Professional Skills Certificate

On March 18, 2021, the Executive Committee (EC) considered the noted proposals.

1) The EC approved the New Graduate Certificate in Climate Change Vulnerability Assessment and Adaption Action with no further discussion. Kalra/Misra: 2 abstentions CARRIED

2) The EC approved the removal of the GPS 960 requirement from the Graduate Professional Skills Certificate requirements with no further discussion. Walker/Jones: Unanimously CARRIED

If you have any questions, please contact Debby Burshtyn, chair of the CGPS Executive Committee at debby.burshtyn@usask.ca or 306-966-5759.

/II
MEMORANDUM

To: Executive Committee of CGPS

Copy: Karsten Liber, Executive Director, School of Environment and Sustainability

From: Graduate Programs Committee

Date: March 11, 2021

Re: New Graduate Certificate in Climate Change Vulnerability Assessment and Adaption Action

On March 1, 2021, the Graduate Programs Committee reviewed a proposal for a new graduate certificate in Climate Change Vulnerability Assessment and Adaption Action. Committee members noted that the curriculum mapping in the proposal looked great. It was noted that the courses for the certificate were being approved through the University Course Challenge process following CGPS approval. The CGPS course review was rigorous, and the proponents had benefitted from committee feedback.

It was noted that the tuition proposed was $500/credit unit, or $1500/class. It was suggested that the proposed tuition seemed high comparative to other UofS programming. It was suggested that the target market for the new certificate would be working practitioners – individuals that would be employed while earning the certificate. It was suggested that the working professionals may have access to professional development funds to assist with tuition costs. It seemed that the minimum enrolment required eight students for the programming to be delivered.

Overall, the proposal seemed well thought out.

The Graduate Programs Committee passed the following motion:

To recommend approval for the Graduate Certificate in Climate Change Vulnerability Assessment and Adaption Action subject to the course approvals. Chibbar/Morrison CARRIED 1 abstention

Attached please find the full proposal.

If you have any questions, please contact Kelly Clement at kelly.clement@usask.ca

:kc
Proposal for Academic or Curricular Change

PROPOSAL IDENTIFICATION: Graduate Certificate for Climate Change

Title of proposal:  *Graduate Certificate in Climate Change Vulnerability Assessment and Adaptation Action*

**Degree(s):** Graduate Certificate

**Field(s) of Specialization:** n/a

**Level(s) of Concentration:** n/a

**Option(s):** n/a

**Degree College:** College of Graduate and Postdoctoral Studies/School of Environment and Sustainability

**Contact person(s):**

Dr. Ryan Walker  
Associate Dean, Policy and Programming Innovation  
College of Graduate and Postdoctoral Studies (CGPS)  
[kelly.clement@usask.ca](mailto:kelly.clement@usask.ca)

Dr. Maureen Reed  
Assistant Director Academic  
School of Environment and Sustainability (SENS)  
[mgr774@mail.usask.ca](mailto:mgr774@mail.usask.ca)

Proposed date of implementation: May 2022

Proposal Document

Please provide information which covers the following sub-topics. The length and detail should reflect the scale or importance of the program or revision. Documents prepared for your college may be used. Please expand this document as needed to embrace all your information.
Academic justification

Overview
EcoCanada’s December 2020 labour market information report estimates “233,500 new environmental workers will need to be hired within the next decade due to job growth and high retirement levels. Of these job openings, close to half (111,900) will be for core environmental workers, defined as those requiring environmental-specific competencies” [1]. Additionally, EcoCanada posits that “education is also a significant factor in obtaining environmental jobs, as over three-quarters of all environmental workers in 2019 had post-secondary educations.”

As the Government of Saskatchewan faces difficult budget decisions related to post-secondary funding and continues to focus on job creation as a priority, this certificate meets the need for labour-market demand for new graduates while adding a vital revenue stream for the School of Environment and Sustainability (SENS).

As requested by professionals working in natural resource sectors and government agencies, this certificate will provide both mid-career professionals and students within our existing programs with an understanding of climate change vulnerability assessment and adaptation, with a focus on key relationships and management applications. Students enrolled in this certificate program will build understanding and develop applied skills in the areas of climate science, vulnerability assessment and adaptation development that together will create capacity for professionals to translate understanding into action by government agencies, private companies, and community planners using adaptation planning. External letters of support attest to the interest in this certificate (Appendix E).

Although the certificate and its constituent courses will be available to students within our existing programs and to graduate students across campus, we will focus on attracting working professionals from government agencies and industry firms working in the natural resource management context as well as NGO professionals looking to upgrade their skills without committing to an entire degree program. The certificate will confer skills and knowledge around how climate vulnerability assessments work and how they can use these assessments to create and implement adaptation plans and action. Such planning is now frequently required by government, certification bodies and/or is demanded by shareholders of private firms. There are no programs in Canada that offer this kind of applied training, putting the University of Saskatchewan at the forefront of a unique and in-demand educational opportunity. As climate change affects many of the UN’s SDGs, this certificate will be relevant to both a national and international audience while promoting the University of Saskatchewan’s promise of being the University the World Needs and demonstrating President Stoicheff’s stated commitment to sustainable development.

Participants will understand how to use climate science to ask: what are the vulnerabilities and risks for a particular management system? How can this knowledge be translated into adaptation plans and practices, taking into account the particular context (management and biophysical system) within which they are working?

Upon completion of the certificate, students will be able to identify the policy, regulatory, and management systems within which they are working; explain interactions among different variables and proposed actions; and consider the policy implications or constraints of proposed changes. Students will also learn how to address climate concerns and issues if climate policy and regulation have not yet been developed. The key components of the certificate are rooted in real-world application from industry and government case studies in natural resources management, making linkages between the science-management-practitioner interface. The certificate is grounded in processes and materials developed by the Intergovernmental Panel on Climate Change (IPCC) [2] and extensive research in the area of assessing vulnerability and developing and implementing climate change adaptations.

a. Describe why the program would be a useful addition to the university, from an academic programming perspective.

Assessing climate change vulnerability, identifying adaptation options, and selecting implementation strategies for action are becoming increasingly important in many forms of land, resource, and community management.
Both public and private sector professionals in Canada and internationally have demonstrated an interest and a need for advanced and applied professional training and development in the areas of climate change science, assessing the vulnerability of land base, resource, and community management systems, adaptation development, planning, and implementation. Industry and government representatives have requested training to meet new requirements being placed on them to demonstrate climate adaptation and action. This program is designed for professionals, practitioners, and those who want to expand their training in the field of climate science, assessment of climate impacts, vulnerabilities, risks, and adaptation actions that can be adopted.

The certificate offers training and professional development that is needed across many organizations around the globe. With climate change being at the forefront in today’s environmental industry, this is an appealing certificate for professional development and expanded training. Potential employment opportunities from the certificate include:

- Government (managers, planners, and policy analysts)
- Industry—with a focus on natural resources (oil and gas, mining, forestry)
- Agriculture sector
- Professionals in other careers (e.g., health) that may want to expand their field or move into other positions
- Graduates from other environmental programs who wish to expand their skills
- Professionals who wish to become leaders/champions in the area of climate change to lead to climate action for their organization
- Cities and communities (urban planning)
- Private sector—environmental and engineering consulting
- Environmental professionals who are mid-career and want to advance and add to their skill set
- Environmental professionals who want to earn or retain professional certification
- NGOs—environmental groups, (e.g., Ducks Unlimited) and environmental education and communication organizations

We have included three letters of support (Appendix F) from agencies and industry as evidence of demand and need for such a training program.

b. Giving consideration to strategic objectives, specify how the new program fits the university signature areas and/or integrated plan areas, and/or the college/school, and/or department plans.

Canada is undergoing a period of profound economic, social, and technological change that needs a “mobile, skilled workforce, constantly learning, training, and upgrading to meet the demands of a changing world.” A mobile workforce needs opportunities to transition between and upgrade within jobs. Increasing access and flexibility of educational opportunities for energy security and regenerative sustainability is a major motivator.

These certificates will also address the issue of accessibility of graduate programs to allow all types of students (including working professionals and students with family commitments) opportunities for further education and skills building. The addition of the graduate certificates in Energy Security and Regenerative Sustainability align with SENS’s strategic plan and are fully consistent with the overall vision of the University of Saskatchewan being “the University the world needs,” “growing in recruitment of students,” and ensuring “our university is viewed as an accessible, go-to resource by partners and stakeholders.”

For SENS, there would be risk in not proceeding with this certificate program since enhancing our enrolment targets is central to the unit’s financial viability. For the University, there is a risk that its bold plan to become “the university the world needs” will not be realized if we do not increase accessibility and flexibility to accommodate a more diverse student body and provide opportunities to engage in our innovative programs that develop leaders, innovators and change-makers. Institutions and agencies in Canada are increasingly investing in developing micro-credential programming to promote skills training and development to enhance employment opportunities. For example, the Government of British Columbia has already taken a lead here; its Ministry of Advanced Education, Skills and Training has put out a call to universities in that province for short proposals to partner with...
employers to develop and deliver micro-credentials. Natural Resources Canada (NRCan) is also funding Building Regional Adaptation Capacity and Expertise (BRACE) programs at universities across Canada to do this. Through our industry partnerships, we have identified this high priority certificate for immediate development before other institutions beat us to it. We are ready to implement the program, but need to do so quickly, to ensure we develop critical leadership in this area. If we do not, then someone else will, and the USask will have lost the opportunity to be a leader in climate change action, something the institution has committed to in its new Sustainability Strategy.

c. Is there a particular student demographic this program is targeted towards and, if so, what is that target? (e.g., Aboriginal, mature, international, returning)

This certificate is designed for professionals, practitioners, and others who seek to expand their interdisciplinary training in the field of climate assessment and adaptation. Students may include

- Government employees (e.g., parks, land, wildlife, and resource managers in sectors such as forestry, mining, agriculture, and energy)
- Policy analysts and policy makers
- Private sector professionals (e.g., environmental consultants, engineers)
- Urban planners/managers (e.g., infrastructure and community planning, urban forestry)
- Industry—managers, planners, supply chain managers, specifically those in natural resource sectors (e.g., mining, forestry, energy)

To maximize accessibility, this certificate will be delivered online. It will meet the needs of professionals and those who want to expand their training but do not wish to leave their current employment or families, and those who have employers who are willing to pay for the additional professional development, but not for a full graduate degree program. It also provides them with a focus on applying technical knowledge in an applied context, which offers something different from more traditional academic graduate programs. The time and cost associated with a certificate program may also make it more feasible and appealing than a full Masters or other graduate program. Additionally, the skills and training developed here could also count towards professional development credits that many professionals require.

d. What are the most similar competing programs in Saskatchewan, and in Canada? How is this program different?

The intention of our certificates is to provide skills development for professionals in work situations rather than train academics. An environmental scan shows few graduate programs related to climate change exist across Canada, and even fewer aimed at training working professionals. While the number of climate change programs in Canada is growing, there are none in the area we propose, which fills a key action-oriented gap needed by government and industry. We note there are degrees or diplomas associated with leadership (Royal Roads), broad training in climate change (Waterloo, and undergrad level training at UPEI and UVic), and training focused on mitigation (University of Toronto). There are no programs tailored specifically to building capacity in vulnerability assessment and adaptation, a focus identified as a key need by our partners in government, the forestry industry and the oil and gas industry.

See Appendix B for a list of other climate change comparator programs.

Admissions

a. What are the admissions requirements of this program?

The admission requirements are:
1. A four-year undergraduate degree, or equivalent, from a recognized college or university in an academic discipline relevant to the proposed field of study, or a three-year first cycle undergraduate degree, in an academic discipline relevant to the proposed field of study, from an institution meeting the criteria set forth in the Bologna Declaration, will be acceptable as the equivalent of an undergraduate degree.

2. A minimum cumulative weighted average of at least a 70% (USask grade system equivalent) in the last two years of study (e.g., 60 credit units).

3. Language Proficiency Requirements: Proof of English proficiency may be required for international applicants and for applicants whose first language is not English. A minimum overall TOEFL score of 86, a minimum overall IELTS score of 6.5, or another approved test as outlined by the College of Graduate and Postdoctoral Studies. [Note: These are minimum language proficiency requirements; however, stronger scores are generally expected for successful entry into the certificate program.]

4. Statement of Intent: Applicants must provide a written Statement of Intent (1000 work maximum) describing why they want to undertake the program and how their expertise, work, and/or volunteer experience make them an ideal candidate for the program and their chosen field of study. This statement is a key component in adjudicating each applicant’s suitability for the program.

5. Letters of reference: Applicants will need to provide two letters of reference—either academic or professional letters.

Probationary Admission: Applicants whose qualifications do not meet the minimum requirements or whose academic qualifications are difficult to assess may be admitted on a probationary status to a program. Applicants in this category may be required to take certain preparatory courses to improve their qualifications. In this case, they will be required to pay additional fees. The student’s status will be reviewed after a specified amount of academic work is completed. If progress is satisfactory, the Program Director or Graduate Chair may recommend to CGPS that the student be considered fully-qualified. Students who do not achieve the probationary conditions may withdraw voluntarily or failing this, will be required to discontinue. In certain exceptional situations, the academic unit may extend the probationary period with a new set of conditions, agreed to by the student and by the College of Graduate and Postdoctoral Studies.

For more information on language proficiency requirements, see the College of Graduate and Postdoctoral Studies Academic Policies.

Description of the program

a. What are the curricular objectives, and how are these accomplished?

The Graduate Certificate in Climate Change Vulnerability Assessment and Adaptation Action will provide professionals with an understanding of the relationships among climate science, vulnerability assessments, adaptation development, and management applications. Graduates will support translation of this understanding by government agencies, private companies, and community planners into specific adaptation plans, leading to climate action.

Upon completion of the certificate (9 credit units), students will be expected to:

- Understand the role and application of climate change science in the process of climate change vulnerability assessments.
- Analyze climate change vulnerability assessment processes and how to apply the results to inform adaptation development for land and resource management systems.
- Identify the regulatory and management framework within which they are working and how that affects their options.
• Be able to identify actions and how they can be used to proactively address the climate change vulnerability implications of environmental and climate change for the organization.
• Analyze potential policy implications from implementing adaptation actions and understand where policy may be constraining or where new policy is needed.

**ENVS 861.3 Fundamentals of Climate Change Vulnerability Assessment**

This course is designed to demonstrate how climate science is used in vulnerability assessments for managing complex socio-ecological systems. It will also explore the concept of vulnerability and the degree to which geophysical, biological and socio-economic systems are susceptible to, and able to cope with, impacts of climate change.

**Outcomes**

By the completion of this course, students will be expected to:

1. Explain the introductory theory and background of climate change vulnerability assessments.
2. Recognize the difference between different types of climate change vulnerability assessments.
3. Demonstrate the application and process of climate change vulnerability assessments through case study application.
4. Examine how complex socio-ecological systems are being affected by climate change and how to approach this in the context of increasing uncertainty.
5. Demonstrate an understanding surrounding the use and application of climate science in vulnerability assessments.

**ENVS 862.3 Building Adaptive Capacity for Climate Change**

This course focuses on assessing the adaptive capacity of organizations and existing sustainable land and community systems to address climate change. The development and implementation of adaptation options will be explored, utilizing existing case studies to discuss opportunities, challenges, and management strategies, through climate change vulnerability assessments.

**Outcomes**

1. Understand the theory and assessment processes of adaptive capacity and its role in determining climate change risk and vulnerability.
2. Evaluate existing case studies that illustrate climate change impacts and vulnerabilities, consider priority adaptation options implemented, and how they would potentially affect planning and operations within sustainable land and community management systems.
3. Examine how results of vulnerability assessments may be used to evaluate and monitor adaptation by organizations and communities.
4. Discuss opportunities, challenges and barriers to adaptation through climate change vulnerability assessments.
5. Understand how to apply climate science, vulnerability assessment and adaptation tools, and techniques designed to achieve mainstreaming of adaptation in environmental and natural resources sectors.

**ENVS 863.3 The Climate Adaptive Organization**

This course focuses on the intersection of climate vulnerabilities, adaptation action, and the application to inform and assess the economic and organizational elements of management and planning for climate change adaptation. Policy implications will be explored in adaptation management and decision making in the organizational case for adaptation action.
Outcomes

1. Recognize different potential costs related to climate change vulnerabilities and adaptation to climate change in sustainable and natural resource management systems and communities.
2. Understand the process of how potential cost increases associated with climate impacts and the ability to achieve management objectives are analyzed.
3. Describe how adaptation actions are chosen and why.
4. Explore why/how costs are attached to the different adaptation strategies or how they may be viewed.
5. Explain the application of applying an organization’s metric to develop a business case for adaptation to guide proactive strategic planning in the sustainable land and natural resource sector, and communities, to build resilience in a changing climate.
6. Explore policy implications in adaptation management and decision-making for organizations engaged in proactive adaptation.

b. Describe the modes of delivery, experiential learning opportunities, and general teaching philosophy relevant to the programming. Where appropriate, include information about whether this program is being delivered in a distributed format.

The motivation behind creating a professional graduate certificate in climate change vulnerability and adaptation action is to create a unique program 1) meets the current and future demand from industry, government, NGOs, and community stakeholders for a grounded, applied program, 2) aims to build key skills and knowledge for land management and resource practitioners to take leadership roles in climate vulnerability assessment and adaptation action, and 3) increases equity through enhanced accessibility and flexibility of program delivery for professionals who have full-time employment commitments, and those with responsibilities that limit the ability to relocate for educational purposes. The characteristics embedded within this certificate program include:

- Grounded case-based learning opportunities
- Training and tools to aid in increasing adaptive capacity and resilience in the area of climate change vulnerability assessments and developing strategies leading to adaptation action
- Clear links to addressing certain UN Sustainable Development Goals
- Current and highly applied solutions-oriented programming
- Experiential learning opportunities (i.e., learning by doing—guided by needs identified by practitioners), such as discussion and networking opportunities with professionals in the field
- Online and blended courses

The results of market survey we conducted in Spring 2020 support our proposed directions toward accessible programming and flexible options. Specifically, 81% of respondents indicated that they are more likely to pursue graduate educational opportunities if our programs offered flexible options such as online courses and the ability to complete programs part-time. Additionally, the majority of prospective students indicated that they would consider graduate programs that offered combined delivery (a blend of online and on-campus).

The certificate is appealing to professionals and those who want to expand their training but do not wish to leave their current employment or families, and those who have employers who are willing to pay for the additional professional development, but not for a full graduate degree program. It also provides them with a focus on applying technical knowledge in an applied context, which offers something different from more traditional academic graduate programs. The time and cost associated with a certificate program may also make it more feasible and appealing than a full Masters or other graduate program.

Our teaching philosophy is focused around building the skills and approaches students need to tackle deep, complex, and long-lasting climate change vulnerability issues and the application of robust, flexible adaptation options for both short and long-term. We employ an experiential, solution-focused, interdisciplinary (sometimes transdisciplinary) approach, with an emphasis on professional skill development and deployment. We will engage case-based learning approaches to build crucial links between the science and grounded application, helping students understand how to apply the new skills and methods they are learning, becoming agents of changes as
they mobilize theory into practice to solve multi-faceted, often wicked, problems. We embrace complexity, helping our students understand the linkages across human and natural systems, and consider the importance of complexity and uncertainty, rather than avoid them. Students deepen their respect for a range of perspectives and ways of knowing, and their understanding of themselves and how their training, skills, attributes, and background affect their role as climate change practitioners.

c. Provide an overview of the curriculum mapping.

d. Identify where the opportunities for synthesis, analysis, application, critical thinking, problem solving are, and other relevant identifiers.

Our certificate program is focused on building professional skills and knowledge for problem solving and application of solutions. We will help students further develop their skills in synthesis and analysis, critical thinking, and problem solving.
We have deliberately created a set of applied courses, grounded in real-world application, that will ensure all students build key skills and knowledge to achieve our graduate attributes. These courses are fundamental to ensuring students gain a breadth of knowledge required to fully understand the complexity of climate change problems and solutions. The courses are designed to focus on application, problem solving, critical thinking, interdisciplinary collaboration, and synthesis. The courses are sequenced and network appropriately to enhance student success. The courses will include delivery by experienced practitioners (through either sessional or guest lecturers). Having access to this professional expertise will help students better understand real-world applications and build their professional networks.

All courses within the Graduate Certificate provide learning opportunities for our graduate students to develop and hone their professional skills, including critical and creative-thinking, interdisciplinary and intercultural collaboration, and professionalism. Our curriculum will also expand their potential for reflection, communication, and leadership. We are using sets of applied, grounded case studies across all courses that enable students to apply different critical “lenses”, and analytical and design approaches. These approaches will equip our graduates with a solutions-oriented skill set well matched to addressing real-world problems and addressing a gap in training and education that currently exists in various sectors. We aspire to not only bring key solutions-oriented practitioners together to become agents of change-build solutions, but ensure they are equipped with the critical interdisciplinary, intersectoral, and intercultural skills required.

These opportunities can be found in:

- **Problem-solving**: 861, 862, 863
- **Synthesis and analysis**: 861, 862, 863
- **Critical thinking**: all of our courses
- **Interdisciplinary collaboration**: everywhere
- **Application**: 861, 862, 863

**e. Explain the comprehensive breadth of the program.**

The primary objective of the Graduate Certificate in Climate Change Vulnerability Assessment and Adaptation Action is to empower graduates to become leaders in addressing climate change-related challenges, build adaptive capacity, and, to design and implement resilient, practical solutions. This certificate is designed to meet the needs of working professionals and recent graduates wanting to expand their skills in climate change-related issues.

Climate change solutions and adaption action do not belong to a single discipline; rather, the transdisciplinary nature of the certificate will bring together the vast expertise of our faculty with the educational and work experiences of our student base. This certificate will not just focus on climate change and adaptation concepts but will also offer opportunities for students to learn how to apply knowledge and gain key skills related to adaptive capacity, resource management, governance, economics, planning and regulation, negotiations, and community engage.

Solving the climate change and adaptation challenges of the world will only happen by bringing people together from across disciplines and ensuring development of critical skills for interdisciplinary, intersectoral, and intercultural collaboration. Not only will the program bring people together from across disciplines, but this mingling of the minds in the context of well-designed programming will also allow us to contribute to and advance positive solutions towards the United Nations' **Sustainable Development Goals (SDGs)**. The following table outlines which of the courses within the certificate work towards addressing specific SDGs.
## Connection to Sustainable Development Goals (SDGs)

<table>
<thead>
<tr>
<th>SDG</th>
<th>Aspiration</th>
<th>CCVAAA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No Poverty</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Zero Hunger</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Good Health &amp; Well-being</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Quality Education</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Gender Equality</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Clean Water &amp; Sanitation</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Affordable &amp; Clean Energy</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Decent Work &amp; Economic Growth</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Industry Innovation &amp; Infrastructure</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Reduced Inequalities</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Sustainable Cities &amp; Communities</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Responsible Consumption &amp; Production</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Climate Action</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Life Below Water</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Life on Land</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Peace &amp; Justice Strong Institutions</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Partnerships for the Goals</td>
<td></td>
</tr>
</tbody>
</table>

f. Referring to the university “Learning Charter”, explain how the 5 learning goals are addressed, and what degree attributes and skills will be acquired by graduates of the program.

The table below illustrates how required courses for each of the proposed certificates align with the Five Learning Objectives outlined in the University’s Learning Charter. The course numbers are listed for each learning objective and its sub-objectives.
### Learning Charter: Five Learning Objectives

<table>
<thead>
<tr>
<th>Description</th>
<th>ENVS 861</th>
<th>ENVS 862</th>
<th>ENVS 863</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pursuit of Truth and Understanding</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Critical thinking</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Multiple ways of knowing and learning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intellectual flexibility</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>Pursuit of Knowledges</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth of understanding in subject area</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Breadth of understanding how subject area intersects with related subject areas</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Understanding how one’s subject area impacts communities</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Using and applying one’s knowledge with respect to all individuals</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>Pursuit of Integrity and Respect</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exercising intellectual integrity and ethical behavior</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Recognizing and thinking through moral and ethical issues</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Recognizing the limits to one’s knowledge, skills and understanding and acting in accordance with these limits</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Appreciate one’s own worldview while showing respect for others’ worldviews</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>Recognizing and thinking through moral and ethical issues</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop and apply research, inquiry, knowledge creation and translation skills</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Communicate clearly, substantively and persuasively in different contexts</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Locate, understand, evaluate and use information effectively, ethically, legally and with cultural appropriateness</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>Pursuit of Skills and Practices</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commit to positive growth and change for oneself and for local, national and global communities</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Act with confidence and strength of purpose for the good of oneself and different communities</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Embrace responsibilities to oneself and others in ways that are authentic and meaningful</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Sharing knowledges and exercise leadership as acts of individual and community responsibility</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

### g. Describe how students can enter this program from other programs (program transferability).

This certificate is open to graduate students from all disciplines. There are no barriers. In fact, we encourage cohorts of students from varying disciplines. This certificate will serve as a stand-alone program for professionals.

### h. Specify the criteria that will be used to evaluate whether the program is a success within a timeframe clearly specified by the proponents in the proposal.

The key benefit of offering this program is training highly qualified professionals in Saskatchewan, Canada, and internationally. By tracking our graduates, we will be able to understand the number of organizations they have helped support in climate change vulnerability assessment and adaptation. Enrollment success can be measured through the number of student applicants, enrollment and completion; program success can be reviewed by the number and quality of external partnerships and professional success of our graduates can be tracked by employer and alumni surveys.

Now is the time for investing in sustainability programming. Climate change and other sustainability issues are of great significance and interest at this time, and working professionals need to "upskill" in these areas to meet these emerging challenges. With our community and industry partners, we are well positioned to attract new...
students, once we make these programs more accessible. This is a strategic addition to our current offerings, which touch on climate change vulnerability and adaptation, but do not teach the specific competencies that are included here. Indeed, this offering crosses over multiple areas of interest, including regenerative sustainability (MSS), energy security (MSS) and water security (MWS), and may be sought by some students as a complementary degree following completion, of their masters level training. Currently, there are no similar programs anywhere in Canada, and offering the program at this time will help establish the University of Saskatchewan as a leader in climate change action.

i. If applicable, is accreditation or certification available, and if so how will the program meet professional standard criteria. Specify in the budget below any costs that may be associated.

Not applicable

Consultation

a. Describe how the program relates to existing programs in the department, in the college or school, and with other colleges. Establish where students from other programs may benefit from courses in this program. Does the proposed program lead into other programs offered at the university or elsewhere?

The proposed certificate will join our suite of other graduate certificates. This addition will further enhance accessibility by allowing part-time students (e.g., working professionals) to take one or more certificates. We see many advantages to offering this certificate:
- Increased accessibility of post-secondary education for diverse students
- More appeal to domestic students
- Potential to ladder students into a Masters program
- An additional revenue stream for SENS
- Address a current gap in professional applied training in the area of climate science, vulnerability assessment, and adaptation action that is grounded in real-world case studies

We note that all courses will be offered in a compressed format and we intend to offer this certificate online to substantively increase accessibility.

Offering a certificate centered around climate change assessment and adaptation will address the issue of accessibility of graduate programs to allow all types of students (including working professionals) opportunities for further education and skills building. This certificate will expand our suite of newly created graduate certificates (in Water Security, Energy Security, and Regenerative Sustainability), which aligns with SENS’s strategic plan. The certificate also takes an immediate step towards meeting the commitments in the new USask Sustainability Strategy and is fully consistent with the overall vision of the University of Saskatchewan being “the University the world needs,” “growing in recruitment of students,” and ensuring “our university is viewed as an accessible, go-to resource by partners and stakeholders” [6] as well as works towards achieving the United Nations’ Sustainable Development Goals [8].

Intensive full-time masters programs are almost impossible for working professionals to wholly commit to given their work and/or family commitments. Via this certificate offering, we seek to significantly increase accessibility to our graduate programming and offer diverse groups of students opportunities to pursue graduate work in sustainability issues and to meet requirements for ongoing professional development. As the global climate continues to change, so do the complex socio-ecological systems that we are managing. The current and potential effects of climate change on socio-ecological systems are expected to have significant implications for land and resource practitioners’ ability to achieve sustainability goals and objectives as they are currently practiced [9].
b. List units that were consulted formally and provide a summary of how consultation was conducted and how concerns that were raised in consultations have been addressed. Attach the relevant communication in an appendix.

No similar certificate programs are offered across campus, nor are there similar courses in any other unit. We have consulted with both Edwards School of Business and the Johnson Shoyama Graduate School of Public Policy—both of which agree that such a program is important and needed. Both units indicated that they currently have no capacity to deliver any of the courses; however, we are discussing options for the delivery of guest lectures in the third course with faculty in these two units. There will also be guest lectures by external government and industry professionals in the first two courses.

c. Proposals that involve courses or other resources from colleges outside the sponsoring unit should include evidence of consultation and approval. Please give special consideration to pre- and co-requisite requires when including courses from other colleges.

Not applicable

d. Provide evidence of consultation with the University Library to ensure that appropriate library resources are available.

We do not anticipate that any additional resources will be required. Therefore, we have not provided the Library Requirements Form. For required course materials, they will either be provided or freely accessible to students with links. Appendix C contains a sample of those materials.

e. List other pertinent consultations and evidence of support, if applicable (e.g., professional associations, accreditation bodies, potential employers, etc.)

Both public and private sector professionals in the natural resource sector have demonstrated an interest and a need for professional training and development in the area of climate change science, assessing vulnerability of their land base and management systems, adaptation development, planning, implementation, and action. This need is seen across the country by both industry and government. Presentations surrounding this need were provided for the following organizations, at their request:

- The Forest Products Association of Canada (March 2018)
- BC Professional Foresters (March 2019)
- Ontario Professional Foresters (May 2019)
- Canada’s Oil Sands Innovation Alliance – COSIA (November 2019)
- The provincial governments of Saskatchewan (Forest Services—September 2019), Alberta (Ken Greenway’s group—November 2019), and British Columbia (Diane Nichols and her executive team March 2020).

All of these organizations saw this as important work and were highly supportive. All recognize the value of how the vulnerability assessment process could be used to engage professionals and support their training and education. In particular, they saw the value of the applied focus that made this process relevant to their organization’s operational and strategic planning and management needs to address climate change. Certification agencies are starting to require more accountability in meeting the standards; investors are wanting to know how industry is accounting for climate vulnerabilities and risk and how they are adapting to these; other stakeholders and the public are looking for social acceptability and license with respect to climate. Letters demonstrating this need and supporting the establishment of courses to meet this need are included in Appendix F.
**Budget**

**a. How many instructors will participate in teaching, advising and other activities related to core program delivery (not including distribution/breadth requirements or electives)? (estimate the percentage time for each person).**

This program will be delivered entirely by a single sessional instructor, who will teach all three courses. We strongly believe this should be a practitioner-led program, hence have budgeted for sessional support, with the plan to engage adjunct professor Sheri Andrews-Key in teaching. Dr. Andrews-Key has a diverse and extensive background in various facets of the application of the climate science-management-policy interface in the environmental and resource-based sectors and government across Canada. Recognizing this is a potential risk to our programmatic continuity, the expectation is that students will complete the certificate within one year. If there is any year when the instructor would not be available or if we do not have sufficient student numbers enrolled in the program, we will not offer the certificate in that year.

**b. What courses or programs are being eliminated in order to provide time to teach the additional courses?**

No programs will be deleted. We are proposing to bundle some of our newly developed climate change courses into this certificate, which will be offered alongside our other certificates.

**c. How are the teaching assignments of each unit and instructor affected by this proposal?**

Because the program will be delivered entirely by a sessional instructor hired specifically for this program, it will not affect the teaching assignments of any faculty within SENS.

**d. Describe budget allocations and how the unit resources are reallocated to accommodate this proposal. (Unit administrative support, space issues, classroom availability, studio/practice rooms laboratory/clinical or other instructional space requirements).**

Given the development of our new courses in climate change vulnerability assessment and adaptation, we propose to package them into the proposed micro-credential to increase accessibility and flexibility, especially for working professionals. We estimate that by combining resources and drawing on increased tuition revenues from approximately 30 students per year, we will have more than sufficient resources to deliver these certificates.

**e. If this program is to be offered in a distributed context, please describe the costs associated with this approach of delivery and how these costs will be covered.**

We intend to offer this certificate online to substantively increase accessibility. However, other than initial development costs, we do not anticipate any other costs associated with the online development and delivery.

**f. If this is an interdisciplinary program, please indicate whether there is a pool of resources available from other colleges involved in the program.**

Not applicable
g. What scholarships will students be able to apply for, and how many? What other provisions are being provided for student financial aid and to promote accessibility of the program?

Students enrolled in certificate programs will not be eligible for financial support.

h. What is the program tuition? Will the program utilize a special tuition model or standard tuition categories? (The approval authority for tuition is the Board of Governors).

Non-standard tuition will be assessed. Students will pay tuition by the course. We propose to set tuition for Year 1 at $1500 per course ($500 per credit unit). Therefore, the total cost of a student will be $4500 for the full certificate.

i. What are the estimated costs of program delivery, based on the total time commitment estimates provided? (Use TABBS information, as provided by the College/School financial officer)

One-time costs: The certificate will be developed by thematically clustering two new courses in climate change offered within SENS plus the third course included in this proposal. We include the costs of developing this course in our calculations ($8000).

On-going costs: We anticipate the following on-going costs associated with the addition of this graduate certificate to SENS’s programming:

- Sessional instructor costs to deliver the three courses comprising the 9-cu certificate requirement [rationale: Student feedback in our existing professional programs indicates the appetite for and importance of having more content and instruction from practitioners from outside the university working in the sectors the students strive to work in.] We estimate approximately $8000 per 3 cu course per year.
- TAships to handle larger class sizes as enrollment grows—which will be easily handled through the revenue generated by enrolment.

We estimate that all costs associated with offering the program will be covered by tuition revenue. For more detail, see Appendix D.

j. What is the enrolment target for the program? How many years to reach this target? What is the minimum enrolment, below which the program ceases to be feasible? What is the maximum enrolment, given the limitations of the resources allocated to the program?

We anticipate student enrolments of approximately 30 students per year within two years. These numbers were determined from requests for this type of programming from government, industry, graduate students, and Natural Resources Canada. We expect the minimum enrolment to be 15 students/year and the maximum to be 35 students/year.

k. What are the total expected revenues at the target enrolment level, separated into core program delivery and distribution/breadth requirements or electives? What portion of this expected revenue can be thought of as incremental (or new) revenue?

In Year 1, the costs would be approximately $37,000 (including costs for development, marketing, delivery and TAships). Conversely, assuming a conservative student enrolment number of 15 students (12 domestic and 3 international), we anticipate a total revenue of $75,330, leading to a projected surplus in Y1 of $38,330. All revenue can be thought of an incremental revenue. We also project significant surpluses in the subsequent four years: $81,463, $114,204, $167,291, and $172,714.
See Appendix D for a breakdown of the budget costs (including our assumptions) over the first five years of the program.

1. **At what enrolment number will this program be independently sustainable?** If this enrolment number is higher than the enrolment target, where will the resources come from to sustain the program, and what commitments define the supply of those resources?

   At $1500 per course, we would only need about 8 students to enroll in all three courses or 24 students to enroll in one course each to cover our expenses.

2. **Proponents are required to clearly explain the total incremental costs of the program. This is to be expressed as:** (i) **total cost of resources needed to deliver the program:** (ii) **existing resources (including in-kind and tagged as such) applied against the total cost:** and (iii) **a listing of those resource costs that will require additional funding (including new in-kind support).**

   See k. above and Appendix D.

3. **List all new funding sources and amounts (including in-kind) and the anticipated contribution of each to offsetting incremental program costs.** Please identify if any indicated funding is contingent on subsequent approval by a funding authority and/or future conditions. Also indicate under what conditions the program is expected to be cost neutral. The proponents should also indicate any anticipated surpluses/deficits associated with the new program.

   We do not anticipate any new funding sources other than tuition revenue to offset the incremental costs. The program will be cost neutral at 8 students completing the certificate a year. As mentioned above, we anticipate a surplus of revenue beginning in the first year of offering the program and continuing in each year beyond. See Appendix D.

**References**


School Statement

Please provide here or attach to the online portal, a statement from the College which contains the following:

- Recommendation from the College regarding the program
- Description of the College process used to arrive at that recommendation
- Summary of issues that the College discussed and how they were resolved

See Appendix A for the School Statement.

Related Documentation

At the online portal, attach any related documentation which is relevant to this proposal to the online portal, such as:

- Excerpts from the College Plan and Planning Parameters (in proposal)
- SPR recommendations (none)
- Relevant sections of the College plan (in proposal)
- Accreditation review recommendations (n/a)
- Letters of support (Appendix F)
- Memos of consultation (none)

It is particularly important for Council committees to know if a curriculum changes are being made in response to College Plans and Planning Parameters, review recommendations or accreditation recommendations.

Consultation Forms

At the online portal, attach the following forms, as required

Required for all submissions:
1. Consultation with the Registrar form (Appendix H)
2. Complete Catalogue entry, if proposing a new program, or excerpt of existing of existing program with proposed changes marked in red.

Catalogue Entry for Graduate Certificate in Climate Change Vulnerability Assessment and Adaptation Action

The Graduate Certificate in Climate Change Vulnerability Assessment and Adaptation Action will provide professionals with an understanding of the relationships among climate science, vulnerability assessments, adaptation development, and management applications. Graduates will support translation of this understanding by government agencies, private companies, and community planners into specific adaptation plans, leading to climate action.

Admission Requirements

1. a four-year undergraduate degree, or equivalent, from a recognized college or university in an academic discipline relevant to the proposed field of study, OR a three-year first cycle undergraduate degree, in an academic discipline relevant to the proposed field of study, from an institution meeting the criteria set forth in the Bologna Declaration, will be acceptable as the equivalent of an undergraduate degree.

2. a minimum cumulative weighted average of at least a 70% (USask grade system equivalent) in the last two years of study (e.g., 60 credit units)

3. Language Proficiency Requirements: Proof of English proficiency may be required for international applicants and for applicants whose first language is not English. A minimum overall TOEFL score of 86, a minimum overall IELTS score of 6.5, or another approved test as outlined by the College of Graduate and Postdoctoral Studies. [Note: These are minimum language proficiency requirements; however, stronger scores are generally expected for successful entry into the certificate program.]

4. Statement of Intent: Applicants must provide a written Statement of Intent (1000 work maximum) describing why they want to undertake the program and how their expertise, work and/or volunteer experience make them an ideal candidate for the program and their chosen field of study. This statement is a key component in adjudicating each applicant’s suitability for the program.

5. Letters of reference: Applicants will need to provide two letters of reference—either academic or professional letters.

Probationary Admission: Applicants whose qualifications do not meet the minimum requirements or whose academic qualifications are difficult to assess may be admitted on a probationary status to a program. Applicants in this category may be required to take certain preparatory courses to improve their qualifications. In this case they will be required to pay additional fees. The student’s status will be reviewed after a specified amount of academic work is completed. If progress is satisfactory, the Program Director or Graduate Chair may recommend to CGPS that the student be considered fully qualified. Students who do not achieve the probationary conditions may withdraw voluntarily or failing this, will be required to discontinue. In certain exceptional situations, the academic unit may extend the probationary period with a new set of conditions, agreed to by the student and by the College of Graduate and Postdoctoral Studies.

For more information on language proficiency requirements, see the College of Graduate and Postdoctoral Studies Academic Policies.
Certificate Requirements

A minimum of 9 credit units including:

- ENVS 861.3  *Fundamentals of Climate Change Vulnerability Assessment*
- ENVS 862.3  *Building Adaptive Capacity for Climate Change*
- ENVS 863.3  *The Climate Adaptive Organization*

3. Course Proposal Forms

The third course in the certificate (ENVS 863.3) is included in this proposal. ENVS 861.3 and ENVS 862.3 have been submitted and approved through University Course Challenge.

Required for all new courses:

- New Course Proposal forms *(Appendix G)*
- Calendar-draft list of new and revised courses

Required if resources needed:

- Information Technology Requirements form *(none)*
- Library Requirements form *(none)*
- Physical Resource Requirements form *(none)*
- Budget Consultation form *(Appendix E)*
MEMORANDUM

To: College of Graduate and Postdoctoral Studies
    University Council

From: Karsten Liber, Executive Director (Interim)

Subject: School Statement: Graduate Certificate in Climate Change Vulnerability Assessment and Adaptation Action

Date: 01 February 2021

CC:

Colleagues,

I am pleased to offer this proposal from the School of Environment and Sustainability (SENS). On 8 January 2021, the faculty of SENS unanimously voted in favour of pursuing this Graduate Certificate in Climate Change Vulnerability Assessment and Adaptation Action.

As the need for climate action becomes more urgent, we recognize that everyone will have to deal with and address climate changes and associated challenges, not the least natural resources companies, natural resource-based business including agriculture, Indigenous and rural communities, and government agencies. Presently, most professionals and decision makers in these sectors do not have access to the required training to support the necessary adaptation and resilience of their workplaces, industries and communities. In the face of significant demand from government and industry, we have the opportunity here to be a lead provider of training in climate action and advance our aspiration of becoming “the university the work needs.” A certificate program focused on vulnerability assessment and adaption action is aligned with the University of Saskatchewan’s priorities related to sustainability programming and increased accessibility to education.

Key issues that were identified and addressed are listed in the table below.
Key issues | Resolution
---|---
Target audience | This certificate is designed for professionals, practitioners, and those who want to expand their interdisciplinary training in the field of climate science, assessment and application of climate impacts and adaption in a management context, and how this translates into the organizational case for adaptation. This may include: government employees, policy analysts and decision makers, private sector, urban planners/managers, industry. You may have a better way of presenting this.

Mode of delivery | The certificate will be delivered online in a multi-modal format (synchronous, asynchronous, and in-person when it becomes available).

Accessibility and flexibility | Courses have also been bundled into more accessible certificate program options that will allow active professionals to broaden and deepen their expertise without the financial or time commitment of pursuing a full post-graduate degree.

Professional skills v. academic offerings | Courses are oriented to supporting professional skill development to address common sustainability issues.

We are very confident that there is a real market need for this certificate, that solid enrolment will happen and that the certificate will bring national attention to the University of Saskatchewan. Furthermore, we are excited to propose a concrete step towards meeting the aspirations set forth in our University’s new Sustainability Strategy.

Thank you for reviewing this proposal. Please let me know if you require any additional information.

Sincerely,

KARSTEN LIBER, PH.D.
Executive Director (Interim) and Distinguished Professor
School of Environment and Sustainability
karsten.liber@usask.ca

KEL/jlm
Appendix B: Climate Change Programs in Canada

There are a growing number of climate change programs in Canada, but none in the area we propose, which fills a key action-oriented gap needed by government and industry. We note there are degrees or diplomas associated with leadership (Royal Roads), broad training in climate change (Waterloo, and undergrad level training at UPEI and UVic), and training focused on mitigation (University of Toronto). There are no programs tailored specifically to building capacity in vulnerability assessment and adaptation, areas identified as a key need by our partners in government, the forestry industry and the oil and gas industry (See letters of support in Appendix F.).

<table>
<thead>
<tr>
<th>Institution</th>
<th>Program</th>
<th>Program Type</th>
<th>Description (+ credit units and courses)</th>
<th>Delivery</th>
<th>Tuition</th>
</tr>
</thead>
</table>
| Royal Roads University    | Master of Arts in Climate Action Leadership   | Master of Arts | - 2-year program for change makers with an interest in bettering our planet through leading actions in policy, practice and scholarship. This competency-based program is focused at the nexus of climate science, social science, justice, and change leadership  
- 36 credit units       | Blended (onsite & online)                   | $25,786 (domestic) $32,496 (international) |
|                          | Graduate Diploma in Climate Action Leadership | Diploma      | - 15 months  
- 18 credit units  
- uses a learner-centered, open learning curriculum that challenges students to reach beyond the walls of the classroom to respond to real world problems and generate real world solutions | blended                | $12,893 (domestic) $16,248 (international) |
|                          | Graduate Certificate in Science of Policy of Climate Change | Certificate  | - the critical knowledge, interdisciplinary education, and practical skills to identify climate challenges and solutions and act on them  
- 3 courses (total 9 cu)  
- Program length = 1 year  
- Partnership with ECO Canada | online                  | $6,530                                      |
| University of Toronto     | Climate Change Policy and Practice            | Certificate   | - 4 required courses  
Students will  
- identify the physical, regulatory and financial impacts of climate change in North American jurisdictions  
- learn what drives the price of carbon and how it can help finance emissions-offset projects  
- Learn how cap-and-trade schemes, taxes and command and control reduce emissions.  
- describe the principles and practices of greenhouse gas emissions validation and verification  
- assess a range of industry and regulatory policies and develop a mitigation strategy for the company of your choosing | onsite                  | $900/course == $3600/cert. |
| University of Waterloo    | Master of Climate Change                     | Master's graduate degree | The MCC program provides a unique educational experience for students looking for advanced training and expertise specific to climate change. Graduates will be part of the first generation of climate change | on-campus              | $2,254/term (full-time) $9,452/term (international) |
professionals and able to pursue diverse career paths in all areas of government, civil society, and local/international development. MCC students will

- Achieve systematic understanding of climate change science, policy and management
- Interpret and evaluate climate change research and policy
- Gain professional skills in research execution, collaborative problem solving, and effective written and oral communication.

- Professional program with major research paper and internship options
- 7 courses (3 required and 2 electives in climate change + 2 open electives) + internship (or major research paper)
- Full- and part-time options

| University of Prince Edward Island | Bachelor of Science in Applied Climate Change and Adaptation | Undergrad degree (BSc) | - 4-year program (120 credit units) - examines "climate change adaptation" which refers to the adjustments that societies or ecosystems make to limit the negative effects of climate change or to take advantage of opportunities provided by a changing climate | On-campus | $6390/year (domestic) $13,860/year (international) |

| University of Victoria | Human Dimensions of Climate Change | Undergrad Certificate | - Students will learn about the complex conditions (historical, political, socio-cultural, economic, technological, etc.) that created and are creating climate change. How are (and will) people in different geographical and social locations experience the future? - 4 required courses + 3 electives (10.5 units total) - can obtain concurrently with a bachelor’s degree | On-campus | None listed |
Appendix C: Sample Resources


### Appendix D: Budget Template

#### Name of Program: Climate Change Vulnerability, Assessment and Adaptation Action

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition revenue:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total # of domestic students (headcount)</td>
<td>12</td>
<td>14</td>
<td>18</td>
<td>15</td>
<td>15</td>
<td>Total headcount: 15, 20, 24, 30</td>
</tr>
<tr>
<td>Domestic tuition rate</td>
<td>$4,500.00</td>
<td>$4,725.00</td>
<td>$4,861.25</td>
<td>$5,116.00</td>
<td>$5,261.39</td>
<td>assumes 5% increases in years 2 &amp; 3 and 3% increases in years 4 &amp; 5</td>
</tr>
<tr>
<td>Total tuition revenue - domestic</td>
<td>$54,000.00</td>
<td>$66,150.00</td>
<td>$89,302.50</td>
<td>$116,519.50</td>
<td>$128,950.85</td>
<td></td>
</tr>
<tr>
<td>Total # of international students (headcount)</td>
<td>3</td>
<td>6</td>
<td>7</td>
<td>15</td>
<td>15</td>
<td>student proportion: 20%, 30%, 40%, 50%, 50%</td>
</tr>
<tr>
<td>International tuition rate</td>
<td>$7,110.00</td>
<td>$7,405.50</td>
<td>$7,830.75</td>
<td>$8,473.94</td>
<td>$8,838.10</td>
<td>assumes international differential of 1.58</td>
</tr>
<tr>
<td>Total tuition revenue - international</td>
<td>$21,330.00</td>
<td>$64,794.00</td>
<td>$54,871.45</td>
<td>$121,169.13</td>
<td>$130,714.34</td>
<td></td>
</tr>
<tr>
<td><strong>Expenditures</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Revenue</td>
<td>$75,330.00</td>
<td>$110,943.00</td>
<td>$144,173.95</td>
<td>$237,688.63</td>
<td>$263,665.19</td>
<td></td>
</tr>
<tr>
<td><strong>Expenditures</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Start-up costs</td>
<td>$13,000.00</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>development of third course (58000) - 35000 marketing &amp; promotion</td>
</tr>
<tr>
<td><strong>Salary and Benefits</strong>:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty</td>
<td>$24,000.00</td>
<td>$24,000.00</td>
<td>$24,000.00</td>
<td>$24,000.00</td>
<td>$24,000.00</td>
<td>$24,000.00</td>
</tr>
<tr>
<td>Sessional or limited term instructional support</td>
<td>$24,000.00</td>
<td>$24,000.00</td>
<td>$24,000.00</td>
<td>$24,000.00</td>
<td>$24,000.00</td>
<td>$24,000.00</td>
</tr>
<tr>
<td>Total salary and benefits</td>
<td>$24,000.00</td>
<td>$24,000.00</td>
<td>$24,000.00</td>
<td>$24,000.00</td>
<td>$24,000.00</td>
<td>$24,000.00</td>
</tr>
<tr>
<td>Scholarships and bursaries</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Marketing and promotion</td>
<td>$5,000.00</td>
<td>$5,000.00</td>
<td>$5,000.00</td>
<td>$5,000.00</td>
<td>$5,000.00</td>
<td>$5,000.00</td>
</tr>
<tr>
<td>Materials and supplies</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Travel</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Equipment and IT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Other costs (List in Comments)</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Total Expenditures</td>
<td>$37,900.00</td>
<td>$39,600.00</td>
<td>$39,600.00</td>
<td>$39,600.00</td>
<td>$39,600.00</td>
<td>$39,600.00</td>
</tr>
<tr>
<td>Estimated Surplus or Deficit</td>
<td>$38,330.00</td>
<td>$71,343.00</td>
<td>$104,573.95</td>
<td>$198,088.63</td>
<td>$224,065.19</td>
<td>$224,065.19</td>
</tr>
</tbody>
</table>

*Relates to fees revenue specific to the course or program (e.g. excursion, lab, materials, etc.). Excludes compulsory institutional fees (e.g. Athletics, Recreation, etc.).
Appendix E: Budget Requirements Form

This form is to be completed with the assistance of the Financial Analyst that is assigned to your College by the Financial Services Division. The Financial Analyst should be contacted early in the process and will assist you in completing a budget template that is appropriate for your proposal.

This form identifies the relevant financial issues that should be summarized in your proposal and is to be completed for all new programs and major revisions regardless of whether new budgetary resources or budget reallocations are required from outside the sponsoring unit.

In particular, as well as summarizing capital and start-up, and permanent or ongoing resource requirements, this form facilitates a summary of the impact of the proposal on the university’s tuition and fee revenue. In addition, all relevant funding sources must be identified, with appropriate letters of support from each funding source.

The information provided herein must be consistent with the financial information required on all other forms that are submitted with the program proposal. In that regard, this form should be finalized after all other required forms are competed and attached to the proposal.

This form is to be completed by the faculty member responsible for the program proposal in consultation with the Financial Services Division. As noted above, contact the Financial Analyst responsible for your College for assistance. (Dial #8303 if you have questions regarding Financial Analyst assignments.)

1. Proposal Identification

Full name of program: Certificate in Climate Change Vulnerability Assessment and Adaptation Action

Short form (degree abbreviation): CCVAAA

Sponsoring Dept/College: School of Environment and Sustainability

2. Full costing of resource requirements

The resource requirements summarized in this section are to be consistent with the information required in all other forms attached to the proposal.

a) Capital and Start-up Costs:

Examples of capital and start-up costs include new space, renovations, equipment, computer hardware and software, media and technology, and faculty costs for course development. Specifically, the resource requirements should agree to the Library, Information Technology, and Physical Resource requirement forms. If
any of the capital and/or start-up costs also permanent operating cost implications, the permanent resource requirements should be summarized below.

Development cost for the 3rd course ($8,000) – courses 1 and 2 are pending approval through university course challenge.
Marketing and development costs ($5,000)

b) Permanent Operating Costs:
Examples of permanent operating costs include costs for faculty, administrative, technical and other support staff, materials and supplies, and media and technology costs. While salary and benefit requirements for faculty and support staff are significant items, the resource requirements noted in the Registrar’s, Library and/or Information Technology forms and ongoing operating or maintenance costs noted in the Physical Resources form, must also be summarized in this section.

Sessional lecturers ($24,000/year with 2% salary escalation)

3. Sources of funding
For the total amount of resources required for both capital and start-up costs, and for permanent operating costs, identify the amount required from each funding source and provide documentation from the funding source to support the amount.

The sources of funding could include the sponsoring college/departments base operating budget, other college/department sources of internal funding, special internal funding allocations such as priority determination, central university funds, and external sources as appropriate. Where the source of funding includes one or more colleges/departments, each individual college/department should be reported separately.

Source of funding is Tuition revenue – see next section and Appendix D.

4. Enrolment (tuition revenue)
The enrolment data summarized in this section is to be consistent with the information required in the New Courses form. Where enrolment growth is projected, the amount and the related time period should be identified and explained.

The enrolment data should be provided in a manner that can be easily used to calculate tuition revenue. For example, enrolment data for degree courses should be presented as either 3-cu or 6-cu equivalents. The information presented should clearly differentiate between actual enrolment levels before the change and expected enrolment levels following the change, including growth as noted above.

a) Sponsoring college/department
The enrolment increases and decreases in courses in the sponsoring college/department must be provided in sufficient detail for a tuition revenue calculation. If enrolment levels are expected to increase significantly, documentation supporting the increase must be provided.
<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total # of students</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Domestic Tuition rates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>per certificate (Yr. 1 - $1,500 per course x 3 courses)</td>
<td>4,500</td>
<td>4,725</td>
<td>4,961.25</td>
<td>5,110.09</td>
<td>5,263.39</td>
</tr>
<tr>
<td>International</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20%</td>
<td>7,110</td>
<td>7,465.50</td>
<td>7,838.78</td>
<td>8,073.94</td>
<td>8,316.16</td>
</tr>
<tr>
<td>Int'l differential</td>
<td>1.58</td>
<td>1.58</td>
<td>1.58</td>
<td>1.58</td>
<td>1.58</td>
</tr>
<tr>
<td>International Tuition rates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Tuition</td>
<td>$75,330</td>
<td>$110,943</td>
<td>$144,174</td>
<td>$197,760</td>
<td>$203,693</td>
</tr>
</tbody>
</table>

Note – above assumes tuition increase of 5% for Years 2 and 3 and 3% for Years 4 and 5.

b) Other college/department:
The enrolment increases and decreases in courses in the other colleges/departments must be provided in sufficient detail for a tuition revenue calculation. If enrolment levels are expected to increase significantly, documentation supporting the increase must be provided.

If enrolments will increase or decrease in other colleges/departments, the change in resources requirements, if any, resulting from the increase or decrease should be included in section 2.

5. Additional Comments
Please provide and additional comments to support the program budget.

n/a

Date: 21 January 2021

Tracey McHardy, SBA- Finance School of Environment and Sustainability
Financial Analyst (assisting in form preparation on behalf of the Financial Services Division)

Dr. Maureen Reed, Assistant Director - Academic, School of Environment and Sustainability
Faculty member (for the sponsoring college/dept)
Appendix F: Letters of Support

The following letters of support have been received for this proposal.

Mark Johnston, PhD, Senior Research Scientist, Saskatchewan Research Council
Paul LeBlanc, District Forester, Louisiana-Pacific Canada Limited
Kate Lindsay, VP Sustainability and Environmental Partnerships, Forest Products Association of Canada (FPAC)
David L. Peterson, Professor and Emeritus Senior Scientist, U.S. Forest Service, Pacific Northwest Research Station
January 29, 2021

Letter of support for:

Certificate Program Development — University of Saskatchewan, School of Environment and Sustainability

This letter is in support of the proposed certificate program focused on the Professional Climate Change Vulnerability Assessment and Business Case for Adaptation. Researchers at the Saskatchewan Research Council have spent more than 20 years working with governments, industry and NGOs on climate change impacts and adaptation. That work was based on ‘learning by doing’ as there was no formal training available in the field of climate change adaptation. A certificate such as the one proposed will go a long way toward preparing students in carrying out climate change vulnerability assessments and identifying adaptation options. And perhaps more important, the certificate will provide the tools for participants to train other natural resource professionals in vulnerability assessment and adaptation planning techniques.

An important aspect of the certificate is its emphasis on ‘real world’ examples and exercises. We have found that it is essential to collaborate closely with practitioners in undertaking these assessments, and a certificate that emphasizes real world experience will assist the students in the ability to interact effectively with natural resource managers. We are confident that students in this certificate course will benefit from this ‘on the ground’ approach.

Finally, a unique aspect of the certificate is Making the Business Case for Adaptation. In our experience it is very clear that natural resource industries (e.g., forestry) need to be able to assess the effects on business of climate change impacts and the economics of implementing adaptation actions. Yet this area is virtually unexplored in literature and in practice in the natural resources field. An emphasis on making the business case will enhance the credibility of the students as they engage with industry and government collaborators.

In short, we strongly support and encourage the University of Saskatchewan to move forward in establishing this certificate and look forward to a new cohort of practitioners skilled in assisting natural resource managers to deal effectively with climate change.

Sincerely,

Mark Johnston, PhD
Senior Research Scientist
October 23rd, 2020

Re: Letter of Support – Climate Change Vulnerability Assessment and Adaptation Action Certificate

Dear University of Saskatchewan;

I am writing this letter in support of the development of a climate change vulnerability assessment and adaptation action certificate. Development of a professional program at the graduate level through a university is a much-needed upgrade for many professionals. This proposed course-based certificate would specifically focus on the application of climate science, vulnerability assessment, adaptation development, planning, implementation in a management context, and the business case for adaptation.

The media focuses on climate change mitigation, but the opportunities for a forest manager really lie with climate change adaptation, which is based on the results of completing a vulnerability assessment. Unfortunately, the process of climate change vulnerability assessments has been a huge gap that neither my Forestry degrees nor my 30 years of work experience prepared me for.

I evaluated what it would take to do a climate change vulnerability assessment, and I realized that ‘muddling through this’ was a steep learning curve that would have taken more time and effort than I could ever afford in my demanding role as a forest manager. At the same time, I also realized that climate change was too important to ignore or defer. The path to successfully assessing climate change vulnerabilities for my company and land base I manage involved working with Dr. Sheri Andrews-Key. She led the LP forestry staff through the vulnerability and adaptation process, and guided, educated, and trained us on the vulnerability process at every phase of the assessment and implementation.

In the implementation phase of the vulnerability assessment, Sheri facilitated our staff to create a customized business case for each adaptation option. These were very relevant (both operational and strategic) and applicable to our land base. This had tremendous value to:

- adapting operations to extreme weather conditions,
- strategic guidance on minimizing risk,
➢ able to meet the new SFI forest certification evidence requirements on climate change adaptation.

The climate change vulnerability assessment and adaptation process that LP has just completed with Dr. Sheri Andrews-Key has given us a professional upgrade for me and our staff. In addition, our Sustainable Forest Management system has climate change vulnerability integrated into our system, not just a separate ‘silo’.

Program/course certificates focusing on the applied pieces of climate science, vulnerability, adaptation and the business case for adaptation in management for forestry would be very valuable and appealing to forestry management professionals in both industry and government.

Please feel free to contact me if you would like to discuss further.

Sincerely,

Paul LeBlanc
District Forester
paul.leblanc@lpcorp.com
T (204) 734-4102 ext. 724
C (204) 734-0421

Louisiana-Pacific Canada Limited
Swan Valley Siding – Forest Resources Division
558 3rd Ave. S.
Swan River, MB R0L1Z0
November 12, 2020
University of Saskatchewan, School of Environment and Sustainability

To Whom it May Concern,

Letter of Support for the proposed SENS certificate courses/program for climate change

On behalf of Forest Products Association of Canada (FPAC), I am pleased to provide our support for the proposed certificate courses and program for climate change vulnerability and adaptation at the University of Saskatchewan, School of Environment and Sustainability.

Canada is feeling the impacts of climate change across the country, from wildland fire, to forest pest outbreaks and drought. We know that foresters, government decision-makers, researchers, forest certification programs and other professionals in land management are looking for effective and efficient ways to include climate change adaptation into their resiliency and sustainability planning.

The concept of having access to knowledge and leading initiatives through a certificate course and program is very timely and valuable for working professionals in the forest and other natural resource sectors, and students hoping to enter the sectors. A certificate course and or program can offer the following:

- An alternative to a traditional full university graduate program, which would provide forestry and other professionals in both the public and private sectors with access to ongoing training, knowledge exchange, information dissemination and direct application in the field and/or within their organizations. Importantly, this could be done while balancing other work and family commitments.

- Means to accelerate the application of climate science into climate risk assessments, and the development and implementation of adaptation actions into management systems at both strategic and operational levels (within organizations). Further, these educational opportunities would help provide the business case for adaptation (including challenges/barriers/costs/benefits/social capital, etc.) and ultimately aid in building capacity for government and industry in the forest sector, leading to more resilient forests and management practices.

- Support for the understanding and dissemination of climate risks and adaptation measures being taken. This is timely given the interest from the financial
community, certification bodies, governments (regulators) and other partners.

• Providing a unique applied "boots on the ground" approach from real-life scenarios and professional experience would be very appealing to industry and natural resource professionals and this knowledge exchange is highly needed.

I would be happy to discuss further or answer any questions about the progress to date and the current interest from forestry professionals in climate change adaptation.

Sincerely,

Kate Lindsay
VP, Sustainability and Environmental Partnerships
Letter of support for:
Certificate Program Development — University of Saskatchewan, School of Environment and Sustainability

I encourage the University of Saskatchewan, School of Environment and Sustainability, to implement a certificate program focused on the Professional Climate Change Vulnerability Assessment and Business Case for Adaptation. This is an excellent opportunity for both practitioners and students to gain the knowledge and professional certification needed for integrating climate change in sustainable natural resource management and other aspects of environmental management and planning.

The mainstreaming of climate change thinking and practice into management and planning has been slow in coming. With over 30 years of climate change science available, we are overdue for incorporating that science in the management of public, private, and First Nations lands. This is critical in order to ensure the sustained production of goods, services, and values that are expected by Canadian citizens and the international community.

The well-conceived courses and program proposed by Dr. Sheri Andrews-Key comprise a unique curriculum, keeping USask on the cutting edge of innovation for its students. At present, students can take various courses that may inform them about climate change issues, but this new approach provides a coherent, integrated package. Furthermore, the new program appeals to environmental managers in the province, ensuring that USask education is directly informing on-the-ground applications in the natural resource sectors and beyond. Having those managers in the program would provide valuable interactions with undergraduate students, graduate students, and faculty.

The proposed courses provide a logical sequence of (1) climate change science (risk assessment), (2) climate change adaptation (risk management), and (3) business case development (implementation). This is conceptually sound, essentially the process that practitioners need to follow in order to integrate climate-related issues into business frameworks and actions. This sequence—and this way of thinking about issues—can be readily transferred from the classroom to the boardroom, planning discussions, financial discussions, and on-the-ground management actions.

This approach proposed for the certificate program has been implemented multiple times in recent years by Dr. Andrews-Key, one of the few people I know who has worked directly with forest industry to operationalize climate change in business practices. Her successes in doing this are opening doors in Canada, making connections with leading companies, Canadian Forest Service, and others. She is uniquely qualified to introduce a certificate program to USask and will ensure a well-trained new cohort of managers and students who will shape the natural resource industry and other enterprises for the challenges presented by climate change.

David L. Peterson
Professor and Emeritus Senior Scientist, U.S. Forest Service, Pacific Northwest Research Station
30 November 2020

Jacquie Thomarat, Associate Secretary  
Planning & Priorities Committee of Council  
c/o University of Saskatchewan Governance Office  
E70 Administration Building  
105 Administration Place  
Saskatoon, SK. S7N 5A2

Dear Planning and Priorities Committee of Council,

RE: Notice of Intent: Graduate Certificate in Climate Change Vulnerability Assessment and Adaptation Action

The School of Environment and Sustainability (SENS) is pleased to submit a Notice of Intent (NOI), proposing a new graduate Certificate in Climate Change Vulnerability Assessment and Adaptation Action.

As the need for climate action becomes more urgent, we recognize that everyone will have to deal with and address climate changes and associated challenges, not the least natural resources companies, natural resource based business including agriculture, Indigenous and rural communities, and government agencies. Presently, most professionals and decision makers in these sectors do not have access to the required training to support the necessary adaptation and resilience of their workplaces, industries and communities. In the face of significant demand from government and industry, we have the opportunity here to be a lead provider of training in climate action and advance our aspiration of becoming “the university the work needs.” A certificate program focused on vulnerability assessment and adaption action is aligned with the University of Saskatchewan’s priorities related to sustainability programming and increased accessibility to education.

We look forward to the feedback from the Planning and Priorities Committee. Thank you for your consideration.

Sincerely,

Karsten Liber, PhD  
Executive Director (Interim) and Distinguished Professor  
School of Environment and Sustainability  
karsten.liber@usask.ca
Overview
As requested by professionals working in natural resource sectors and government agencies, this certificate will provide professionals and professional students within our existing programs with an understanding of climate change vulnerability assessment and adaptation, with a focus on key relationships and management applications. Students enrolled in this certificate program will build understanding and develop applied skills in the areas of climate science, vulnerability assessment and adaptation development that together will create capacity for professionals to translate understanding into action by government agencies, private companies, and community planners using adaptation planning. External letters of support attached in Appendix D attest to the interest in this certificate.

Although the certificate and its constituent courses will be available to students within our existing programs and to graduate students across campus, we will focus on attracting working professionals and community planners from government agencies and firms working in the natural resource management context. The certificate will confer skills and knowledge around how climate vulnerability assessments work and how they can use these assessments to create and implement adaptation plans and action. Such planning is now frequently required by government, certification bodies and/or is demanded by shareholders of private firms. There are no programs in Canada that offer this kind of applied training. Participants will understand how to use climate science to ask: what are the vulnerabilities and risks for a particular management system? How can this knowledge be translated into adaptation plans and practices, taking into account the particular context (management and biophysical system) within which they are working?

Upon completion of the certificate, students will be able to identify the policy, regulatory, and management systems within which they are working; explain interactions among different variables and proposed actions; and consider the policy implications or constraints of proposed changes. Students will also learn how to address climate concerns and issues if climate policy and regulation have not yet been developed. The key components of the certificate are rooted in real-world application from industry and government case studies in natural resources management, making linkages between the science-management-practitioner interface. The certificate is grounded in processes and materials developed by the Intergovernmental Panel on Climate Change (IPCC) [1] and extensive research in the area of assessing vulnerability and developing and implementation of adaption to climate change.

1. What is the motivation for proposing these programs at this time? What elements of the University and/or society support and/or require this program?
Assessing climate change vulnerability, identifying adaptation options, and selecting implementation strategies for action are becoming increasingly important in many forms of land, resource, and community management. Both public and private sector professionals in Canada and beyond have demonstrated an interest and a need for advanced and applied professional training and development in the areas of climate change science, assessing the vulnerability of land base, resource, and community management systems, adaptation development, planning, and implementation.[2] Industry and government have requested training to meet new requirements being placed on them to demonstrate climate adaptation and action. This program is designed for professionals, practitioners, and those who want to expand their training in the field of climate science, assessment of climate impacts, vulnerabilities, risks, and adaptation actions that can be adopted.
2.1 What is the anticipated student demand for the program?

This certificate is designed for professionals, practitioners, and others who seek to expand their interdisciplinary training in the field of climate assessment and adaptation. This may include:

- Government employees (e.g., parks, land, wildlife, and resource managers in sectors such as forestry, mining, agriculture, and energy)
- Policy analysts and policy makers
- Private sector professionals (e.g., environmental consultants, engineers)
- Urban planners/managers (e.g., infrastructure and community planning, urban forestry)
- Industry—managers, planners, supply chain managers, specifically those in natural resource sectors (e.g., mining, forestry, energy)

To maximize accessibility, this certificate will be delivered online. It will be appealing to professionals and those who want to expand their training but do not wish to leave their current employment or families, and those who have employers who are willing to pay for the additional professional development, but not for a full graduate degree program. It also provides them with a focus on applying technical knowledge in an applied context, which offers something different from more traditional academic graduate programs. The time and cost associated with a certificate program may also make it more feasible and appealing than a full Masters or other graduate program. Additionally, the skills and training developed here could also count towards professional development credits that many professionals require.

Both public and private sector professionals in the natural resource sector have demonstrated an interest and a need for professional training and development in the area of climate change science, assessing vulnerability of their land base and management systems, adaptation development, planning, implementation, and action. This need is seen across the country by both industry and government. Presentations surrounding this need were provided for the following organizations, at their request:

- The Forest Products Association of Canada (March 2018);
- BC Professional Foresters (March 2019);
- Ontario Professional Foresters (May 2019);
- Canada’s Oil Sands Innovation Alliance – COSIA (November 2019);
- The provincial governments of Saskatchewan (Forest Services – September 2019), Alberta (Ken Greenway’s group – November 2019), and British Columbia (Diane Nichols and her executive team March 2020).

All of these organizations saw this as important work and were highly supportive. All recognize the value of how the vulnerability assessment process could be used to engage professionals and support their training and education. In particular, they saw the value of the applied focus that made this process relevant to their organization’s operational and strategic planning and management needs to address climate change. Certification agencies are starting to require more accountability in meeting the standards; investors are wanting to know how industry is accounting for climate vulnerabilities and risk and how they are adapting to these; other stakeholders and the public are looking for social acceptability and license with respect to climate. Letters demonstrating this need and supporting the establishment of courses to meet this need are included in Appendix D.

2.2 Does the program meet a perceived need, particularly within a national context?

The certificate offers training and professional development that is needed across many organizations around the globe. With climate change being at the forefront in today’s environmental industry [3], this is an appealing certificate for professional development and expanded training. Potential employment opportunities from the certificate include:

- Government (managers, planners, and policy analysts)
- Industry—with a focus on natural resources (oil and gas, mining, forestry)
- Agriculture sector
• Professionals in other careers (e.g., health) that may want to expand their field or move into other positions
• Graduates from other environmental programs who wish to expand their skills
• Professionals who wish to become leaders/champions in the area of climate change to lead to climate action for their organization
• Cities and communities (urban planning)
• Private sector—environmental and engineering consulting
• Environmental professionals who are mid-career and want to advance and add to their skill set
• Environmental professionals who want to earn or retain professional certification
• NGOs—environmental groups, (e.g., Ducks Unlimited) and environmental education and communication organizations

We have included three letters of support (Appendix D) from agencies and industry as evidence of demand and need for such a training program.

2.3 What is the projected student enrolment in the program initially and over time, and on what evidence is the projection based?

We anticipate student enrolments of approx. 30 students per year within two years. These numbers were determined from requests for this type of programming from government, industry, graduate students, and Natural Resources Canada.

3.1 How does this proposal fit with the priorities of the current college or school plan, the University Plan 2025, and the university’s Vision, Mission and Values?

Offering a certificate centered around climate change assessment and adaptation will address the issue of accessibility of graduate programs to allow all types of students (including working professionals) opportunities for further education and skills building. This certificate will expand our suite of newly created graduate certificates (in Water Security, Energy Security, and Regenerative Sustainability), which aligns with SENS’s strategic plan. The certificate also takes an immediate step towards meeting the commitments in the new USask Sustainability Strategy and is fully consistent with the overall vision of the University of Saskatchewan being “the University the world needs,” “growing in recruitment of students,” and ensuring “our university is viewed as an accessible, go-to resource by partners and stakeholders” [4] as well as works towards achieving the United Nations’ Sustainable Development Goals [5].

3.2 If the program was not envisioned during the integrated planning process, what circumstances have provided the impetus to offer the program at this time?

Intensive full-time masters programs are almost impossible for working professionals to wholly commit to given their work and/or family commitments. Via this certificate offering, we seek to significantly increase accessibility to our graduate programming and offer diverse students opportunities to pursue graduate work in sustainability issues and to meet requirements for ongoing professional development. As the global climate continues to change, so do the complex socio-ecological systems that we are managing. The current and potential effects of climate change on socio-ecological systems are expected to have significant implications for land and resource practitioners’ ability to achieve sustainability goals and objectives as they are currently practiced [6].

3.3 Are there measurable benefits to offering the program at this time?

The key benefit of offering this program is training highly qualified professionals in Saskatchewan, Canada, and internationally. By tracking our graduates, we will be able to understand the number of organizations they have helped support in climate change vulnerability assessment and adaptation. Enrolment success can be measured through the number of student applicants, enrolment and completion; program success can be reviewed by the
number and quality of external partnerships and professional success of our graduates can be tracked by employer and alumni surveys.

Now is the time for investing in sustainability programming. Climate change and other sustainability issues are of great significance and interest at this time, and working professionals need to “upskill” in these areas to meet these emerging challenges. With our community and industry partners, we are well positioned to attract new students, once we make these programs more accessible. This is a strategic addition to our current offerings, which touch on climate change vulnerability and adaptation, but do not teach the specific competencies that are included here. Indeed, this offering crosses over multiple areas of interest, including regenerative sustainability (MSSs), energy security (MSSs) and water security (MWS), and may be sought by some students as a complementary degree following completion, of their masters level training. Currently, there are no similar programs anywhere in Canada, and offering the program at this time will help establish the University of Saskatchewan as a leader in climate change action.

4.1 What is the relationship of the proposed program to other programs offered by the college or school and to programs offered elsewhere (interactions, similarities, differences, relative priorities)?

The proposed certificate will join our suite of other graduate certificates. This addition will further enhance accessibility by allowing part-time students (e.g., working professionals) to take one or more certificates. We see many advantages to offering this certificate:
- Increased accessibility of post-secondary education for diverse students
- More appeal to domestic students
- Potential to ladder students into a Master’s program
- An additional revenue stream for SENS
- Address a current gap in professional applied training in the area of climate science, vulnerability assessment, and adaptation action that is grounded in real-world case studies

We note that all courses will be offered in a compressed format and we intend to offer this certificate online to substantively increase accessibility.

There are a growing number of climate change programs in Canada. However, there are none in the area we propose, which fills a key action-oriented gap needed by government and industry (Appendix B). We note there are degrees or diplomas associated with leadership (Royal Roads), broad training in climate change (Waterloo, and undergrad level training at UPEI and UVic), and training focused on mitigation (University of Toronto). There are no programs tailored specifically to building capacity in vulnerability assessment and adaptation, a focus identified as a key need by our partners in government, the forestry industry and the oil and gas industry.

See Appendix A for description of the certificate and sample resources/materials.

4.2 What effect will the proposed program have on other similar or related programs, and, in particular, on student enrolment in these programs?

We foresee no negative impact on student enrolment in other or related programs. We see a net gain to enrollment numbers at USask due to diverse students (specifically, working professionals, a relatively “untapped” demographic to date) accessing educational opportunities in the School and possibly enrolling in other certificates or moving on to full graduate programs.

4.3 Is there justification to proceed regardless of any perceived duplication?

Not applicable. No similar certificate programs are offered across campus, nor are there similar courses in any other unit. We are, however, discussing options for the delivery of guest lectures in the third course with faculty in the Edwards School of Business and the Johnson Shoyama Graduate School of Public Policy. There will also be guest lectures by external government and industry professionals in the first two course. Those details will be presented in the full proposal. There is no concern for duplication.
4.4 Will a program be deleted as a result of offering the new program?
No programs will be deleted. We are proposing to bundle some of our newly developed climate change courses into this certificate, which will be offered alongside our other certificates.

5.1 Please describe the resources available and committed to the program, both in terms of one-time costs and ongoing operating costs.

One-time costs: The certificate will be developed by thematically clustering three new courses in climate change offered within SENS.

On-going costs: We anticipate the following on-going costs associated with the addition of this graduate certificate to SENS’s programming:
- Sessional instructor costs to deliver the three courses comprising the 9 cu certificate requirement [rationale: Student feedback in our existing professional programs indicates the appetite for and importance of having more content and instruction from practitioners from outside the university working in the sectors the students strive to work in.] We estimate approximately $8000 per 3 cu course per year.
- TAships to handle larger class sizes as enrollment grows—which will be easily handled through the revenue generated by enrolment.

We estimate that all costs associated with offering the program will be covered by tuition revenue. The costs for next year would be $24,000 for delivery of all three courses, plus TA costs. At $1500 per course, we would only need about 8 students to enroll in all three courses or 24 students to enroll in one course to cover sessional and TA costs.

5.2 How will tuition be assessed for the program and what is the rationale for the tuition proposed?
Non-standard tuition will be assessed. Students will pay tuition by the course (per 3-credit unit course).

5.3 Does the college or school possess the resources required to implement and support the program (faculty teaching, administrative and other support, student funding, classroom space, infrastructure)?

Given the development of our new courses in climate change vulnerability assessment and adaptation, we propose to package them into the proposed micro-credential to increase accessibility and flexibility, especially for working professionals. We estimate that by combining resources and drawing on increased tuition revenues from approximately 30 students per year, we will have more than sufficient resources to deliver these certificates.

5.4 Will additional university resources be required, for example, library resources, IT support?
We do not anticipate that any additional resources will be required. For required course materials, they will either be provided or freely accessible to students with links. Appendix A contains a sample of those materials.

5.5 Has the Provost or Institutional Planning and Assessment Office been involved in any discussions related to resources?
No, we do not anticipate the need for any additional resources from the Provost’s Office. However, the interim Provost has been informed of this initiative.
5.6 Please attach a letter of support outlining the resource commitments that have been made to the new program.

We are currently consulting with the Johnson Shoyama Graduate School of Public Policy and the Edwards School of Business about their guest lectures in the certificate. No resource commitments from other units are required.

6.1 Please describe the risks, assumptions, or constraints associated with initiating this new program at this time.

Recognizing that Canada is a region undergoing some of the most rapid climatic change of any area on earth, with particularly severe sensitivity in the North, we have identified climate change assessment and action as a high priority area for development and an area of significant interest to industry and government across the country. We will need to maximize remote access to ensure we can reach cohorts in sensitive areas who are unable to relocate to participate in the certificate program. We believe that micro-credentials will increase accessibility of post-secondary education for all potential students (including working professionals, remote and distance students, and part-time students). Micro-credentials will likely be more appealing to domestic students, and will have the potential to ladder interested students into a Master’s program.

We strongly believe this should be a practitioner-led program, hence have budgeted for sessional support, with the plan to engage adjunct professor Sheri Andrews-Key in teaching. Dr. Andrews-Key has a diverse and extensive background in various facets of the application of the climate science-management-policy interface in the environmental and resource based sectors and government across Canada. Recognizing this is a potential risk to our programmatic continuity, the expectation is that students will complete the certificate within one year. If there is any year when the instructor would not be available or if we do not have sufficient student numbers enrolled in the program, we will not offer the certificate in that year.

6.2 Has a risk analysis of this program been conducted, relative to the probable success of the program and those factors that impact on the likelihood of success?

No systematic risk analysis has been completed to date. However, we have consulted with major companies, industry organizations and government agencies and we have very strong signals that this certificate would be well subscribed. These soft commitments will be strengthened prior to developing our full proposal. In addition, we will undertake further consultation with partner units and organizations, and refine the financial analysis.

6.3 What risks are associated with not proceeding with the program at this time?

For SENS, there would be risk in not proceeding with this certificate program since enhancing our enrolment targets are central to the unit’s financial viability. For the University, there is a risk that its bold plan to become “the university the world needs” will not be realized if we do not increase accessibility and flexibility to accommodate a more diverse student body and provide opportunities to engage in our innovative programs that develop leaders, innovators and change-makers. Institutions and agencies in Canada are increasingly investing in developing micro-credential programming to promote skills training and development to enhance employment opportunities [7]. For example, the Government of British Columbia has already taken a lead here; its Ministry of Advanced Education, Skills and Training has put out a call to universities in that province for short proposals to partner with employers to develop and deliver micro-credentials (See Appendix D). Natural Resources Canada (NRCan) is also funding Building Regional Adaptation Capacity and Expertise (BRACE) programs at universities across Canada to do this. Through our industry partnerships, we have identified this high priority certificate for immediate development before other institutions beat us to it. We are ready to implement the program, but need to do so quickly, to ensure we develop critical leadership in this area. If we do not, then someone else will, and the USask will have lost the opportunity to be a leader in climate change action, something the institution has committed to in its new Sustainability Strategy.
7.1 What is the anticipated start date of the program?
September 2021

7.2 What considerations apply to the start date, including changes within the Student Information System.
The following considerations apply:
- implementing sufficient marketing to attract high quality students to start in 2021
- addressing registration and course builds to allow non-degree students to take these courses
- the biggest consideration related to start date is the number of steps and committees that this proposal will have to go through to get approved

Regardless of any outstanding tasks and considerations, we are very confident that there is a real market need for this certificate, that solid enrolment will happen and that the certificate will bring national attention to the University of Saskatchewan. Furthermore, we are excited to propose a concrete step towards meeting the aspirations set forth in our University’s new Sustainability Strategy.

References
Appendix A: Proposed Certificate Description and Sample Resources

The **Graduate Certificate in Climate Change Vulnerability Assessment and Adaptation Action** will provide professionals with an understanding of the relationships among climate science, vulnerability assessments, adaptation development, and management applications. Graduates will support translation of this understanding by government agencies, private companies, and community planners into specific adaptation plans, leading to climate action.

Upon completion of the certificate (9 credit units), students will be expected to:

- Understand the role and application of climate change science in the process of climate change vulnerability assessments.
- Analyze climate change vulnerability assessment processes and how to apply the results to inform adaptation development for land and resource management systems.
- Identify the regulatory and management framework within which they are working and how that affects their options.
- Be able to identify actions and how they can be used to proactively address the climate change vulnerability implications of environmental and climate change for the organization.
- Analyze potential policy implications from implementing adaptation actions and understand where policy may be constraining or where new policy is needed.


Appendix B: Climate Change Programs in Canada

**U15 comparators are shaded in green**

There are a growing number of climate change programs in Canada, but none in the area we propose, which fills a key action-oriented gap needed by government and industry. We note there are degrees or diplomas associated with leadership (Royal Roads), broad training in climate change (Waterloo, and undergrad level training at UPEI and UVic), and training focused on mitigation (University of Toronto). There are no programs tailored specifically to building capacity in vulnerability assessment and adaptation, areas identified as a key need by our partners in government, the forestry industry and the oil and gas industry (See letters of support in Appendix D.).

<table>
<thead>
<tr>
<th>Institution</th>
<th>Program</th>
<th>Program Type</th>
<th>Description (+ credit units and courses)</th>
<th>Delivery</th>
<th>Tuition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Royal Roads</td>
<td>Master of Arts in Climate Change Action Leadership</td>
<td>Master of Arts</td>
<td>- 2-year program for change makers with an interest in bettering our planet through leading actions in policy, practice and scholarship. This competency-based program is focused at the nexus of climate science, social science, justice, and change leadership - 36 credit units</td>
<td>Blended</td>
<td>$25,786 (domestic) $32,496 (international)</td>
</tr>
<tr>
<td>University</td>
<td>Diploma in Climate Action Leadership</td>
<td>Diploma</td>
<td>- 15 months - 18 credit units - uses a learner-centered, open learning curriculum that challenges students to reach beyond the walls of the classroom to respond to real world problems and generate real world solutions</td>
<td>blended</td>
<td>$12,893 (domestic) $16,248 (international)</td>
</tr>
<tr>
<td>University</td>
<td>Certificate in Science of Policy of Climate Change</td>
<td>Certificate</td>
<td>- the critical knowledge, interdisciplinary education, and practical skills to identify climate challenges and solutions and act on them - 3 courses (total 9 cu) - Program length = 1 year - Partnership with ECO Canada</td>
<td>online</td>
<td>$6,530</td>
</tr>
<tr>
<td>University of</td>
<td>Climate Change Policy and Practice</td>
<td>Certificate</td>
<td>- 4 required courses Students will - identify the physical, regulatory and financial impacts of climate change in North American jurisdictions - learn what drives the price of carbon and how it can help finance emissions-offset projects - Learn how cap-and-trade schemes, taxes and command and control reduce emissions. - describe the principles and practices of greenhouse gas emissions validation and verification - assess a range of industry and regulatory policies and develop a mitigation strategy for the company of your choosing</td>
<td>onsite</td>
<td>$900/course == $3600/cert.</td>
</tr>
<tr>
<td>Toronto (School of Continuing Studies)</td>
<td>Master of Climate Change</td>
<td>Master’s graduate degree</td>
<td>The MCC program provides a unique educational experience for students looking for advanced training and expertise specific to climate change. Graduates will be part of the first generation of climate change</td>
<td>on-campus</td>
<td>$2,254/term (full-time) $9,452/term (international)</td>
</tr>
</tbody>
</table>
professionals and able to pursue diverse career paths in all areas of government, civil society, and local/international development. MCC students will

- Achieve systematic understanding of climate change science, policy and management
- Interpret and evaluate climate change research and policy
- Gain professional skills in research execution, collaborative problem solving, and effective written and oral communication.

- Professional program with major research paper and internship options
- 7 courses (3 required and 2 electives in climate change + 2 open electives) + internship (or major research paper)
- Full- and part-time options

<table>
<thead>
<tr>
<th>University of Prince Edward Island</th>
<th><strong>Bachelor of Science in Applied Climate Change and Adaptation</strong></th>
<th>Undergrad degree (BSc)</th>
<th>4-year program (120 credit units)</th>
<th>On-campus</th>
<th>$6390/year (domestic) $13,860/year (international)</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Victoria</td>
<td><strong>Human Dimensions of Climate Change</strong></td>
<td>Undergrad Certificate</td>
<td>Students will learn about the complex conditions (historical, political, socio-cultural, economic, technological, etc.) that created and are creating climate change. How are (and will) people in different geographical and social locations experience the future?</td>
<td>On-campus</td>
<td>None listed</td>
</tr>
</tbody>
</table>
Appendix C: Evidence of Investment in Micro-credentialling and Demand

Short-Form Request for Proposals
B.C. Micro-Credential Initiative

The Ministry of Advanced Education, Skills and Training (“the Ministry”) is inviting Short-Form Proposals from public post-secondary institutions (PSIs) or consortiums of institutions in partnership with employer partners to develop and deliver micro-credentials.

As part of this initiative, the Ministry is making a $2 million investment to support the early implementation of 10 high-demand micro-credentials to be developed and ready for initial enrollment by November 2020 – January 2021.

Micro-credentials developed through this initiative will enable British Columbians to quickly and effectively re-skill and up-skill for employment opportunities in high-demand sectors.

The micro-credentials will increase access to high-quality, relevant and affordable education in B.C.’s public post-secondary education system and help:

- British Columbians develop additional skills and competencies to access good jobs and to fully participate in economic recovery; and
- employers find qualified employees for high-demand positions.

The micro-credentials will:

- support access to further education, including stacking with other future micro-credentials or laddering into larger credentials;
- be validated by employers as meeting an existing skills/competency gap; and
- build on existing work underway to support delivery of high-quality micro-credentials starting between November 2020 and January 2021.

Timeframe

The Ministry is inviting interested public PSIs to submit by October 5, 2020, one or two proposals for micro-credentials that will help British Columbians effectively re-skill and up-skill for employment opportunities in high-demand sectors starting between November 2020 and January 2021.

By mid-October 2020, the Ministry will make decisions on 10 micro-credentials to be funded through this initiative based on how well they (1) meet the priority considerations identified above and in the attached Proposal form and (2) collectively illustrate how micro-credentials from BC’s public post-secondary education system can effectively respond to needs from a wide range of high-demand sectors.

The 10 micro-credentials developed under this initiative will be used to support broader discussions on micro-credentials in B.C.’s post-secondary education system and will help inform the development of a B.C. Micro-credential Framework starting in fall/winter 2020.

Instructions

Using the attached Proposal form, interested public PSIs are invited to respond to this request through their Vice-President, Academic by October 5, 2020. To assist in the development of a suitable range of proposals and to avoid duplicative efforts, PSIs are encouraged to work with their respective sector associations (B.C. Colleges, the B.C. Association of Institutes and Universities, and the Research University Council of B.C.) and other
institutions on potential areas of focus.

These short-form proposals should be no more than two pages and include:

- Contact information for the lead applicant including name, title, telephone and e-mail.
- An overview of the proposed micro-credential and how it addresses a need in a high-demand sector.
- Description of how the micro-credential will be developed and implemented, including timelines, and evidence of employer validation.
- Description of expected success measures, including anticipated enrollments.
- One-time funding request and sustainability plan.

If submitting more than one proposal (maximum of 2), please rank your submissions in terms of priority.

As needed, institutions may be contacted by the Ministry for further information about their proposals.

Proposals should be submitted electronically to Carrie.Dusterhoft@gov.bc.ca by the PSI’s Office of the Vice-President, Academic before 4:00 PM on Monday October 5, 2020.

Questions about the Micro-credential Initiative and the application process should be directed to:

Carrie Dusterhoft, Director  
Carrie.Dusterhoft@gov.bc.ca

Dean Goodman, Executive Director  
Dean.Goodman@gov.bc.ca

Post Secondary System Policy and Liaison Branch Ministry of Advanced Education, Skills and Training

Attachment:

Short-Form Request for Proposals – Micro-Credential Initiative
Short-Form Request for Proposals
Micro-Credential Initiative

Maximum 2 typed pages

Contact
[Contact information for the lead applicant including name, title, telephone and e-mail.]

Overview
[Provide a description of the proposed micro-credential, including what need is being addressed in a high employment demand area, demographics targeted, and expected length of the learning experience.]

Project Implementation
[Describe who will develop the micro-credential and how and where it will be implemented, including any partnerships with other public post-secondary institutions, employers, or other partners; education and awareness components; and connections to work underway. Please provide evidence of existing employer validation and how employer validation will be ensured after development. Please indicate how you will support access to enrollment, including for people not currently enrolled in your institution or who have not accessed post-secondary education before or in quite some time. Please indicate the earliest expected date for enrollment.]

Success Measures
[Please provide evidence to demonstrate ability to have the micro-credential ready for enrollment by November 2020 and January 2021 (at the latest). Describe how the micro-credential will meet the needs of students, employers, and the province using available evidence and how success will be measured. Please estimate the number of individuals that could complete the micro-credentials by March 31, 2021.]

One-Time Funding Request and Sustainability Plan
[Provide a one-time funding request, with a short description of how funding would be used in 2020/21 fiscal year. Describe your plan for ensuring the ongoing sustainability of the micro-credential, including future funding sources such as tuition and/or employer partnerships. Please provide expected tuition fee.]
Appendix D: Letters of Support

Paul LeBlanc, District Forester, Louisiana-Pacific Canada Limited
Kate Lindsay, VP Sustainability and Environmental Partnerships, Forest Products Association of Canada (FPAC)
David L. Peterson, Professor and Emeritus Senior Scientist, U.S. Forest Service, Pacific Northwest Research Station
October 23rd, 2020

Re: Letter of Support – Climate Change Vulnerability Assessment and Adaptation Action Certificate

Dear University of Saskatchewan;

I am writing this letter in support of the development of a climate change vulnerability assessment and adaptation action certificate. Development of a professional program at the graduate level through a university is a much-needed upgrade for many professionals. This proposed course-based certificate would specifically focus on the application of climate science, vulnerability assessment, adaptation development, planning, implementation in a management context, and the business case for adaptation.

The media focuses on climate change mitigation, but the opportunities for a forest manager really lie with climate change adaptation, which is based on the results of completing a vulnerability assessment. Unfortunately, the process of climate change vulnerability assessments has been a huge gap that neither my Forestry degrees nor my 30 years of work experience prepared me for.

I evaluated what it would take to do a climate change vulnerability assessment, and I realized that ‘muddling through this’ was a steep learning curve that would have taken more time and effort than I could ever afford in my demanding role as a forest manager. At the same time, I also realized that climate change was too important to ignore or defer. The path to successfully assessing climate change vulnerabilities for my company and land base I manage involved working with Dr. Sheri Andrews-Key. She led the LP forestry staff through the vulnerability and adaptation process, and guided, educated, and trained us on the vulnerability process at every phase of the assessment and implementation.

In the implementation phase of the vulnerability assessment, Sheri facilitated our staff to create a customized business case for each adaptation option. These were very relevant (both operational and strategic) and applicable to our land base. This had tremendous value to:

- adapting operations to extreme weather conditions,
- strategic guidance on minimizing risk,
➢ able to meet the new SFI forest certification evidence requirements on climate change adaptation.

The climate change vulnerability assessment and adaptation process that LP has just completed with Dr. Sheri Andrews-Key has given us a professional upgrade for me and our staff. In addition, our Sustainable Forest Management system has climate change vulnerability integrated into our system, not just a separate ‘silo’.

Program/course certificates focusing on the applied pieces of climate science, vulnerability, adaptation and the business case for adaptation in management for forestry would be very valuable and appealing to forestry management professionals in both industry and government.

Please feel free to contact me if you would like to discuss further.

Sincerely,

Paul LeBlanc
District Forester
paul.leblanc@lpcorp.com
T (204) 734-4102 ext. 724
C (204) 734-0421

Louisiana-Pacific Canada Limited
Swan Valley Siding – Forest Resources Division
558 3rd Ave. S.
Swan River, MB R0L1Z0

[Signature]
To Whom it May Concern,

**Letter of Support for the proposed SENS certificate courses/program for climate change**

On behalf of Forest Products Association of Canada (FPAC), I am pleased to provide our support for the proposed certificate courses and program for climate change vulnerability and adaptation at the University of Saskatchewan, School of Environment and Sustainability.

Canada is feeling the impacts of climate change across the country, from wildland fire, to forest pest outbreaks and drought. We know that foresters, government decision-makers, researchers, forest certification programs and other professionals in land management are looking for effective and efficient ways to include climate change adaptation into their resiliency and sustainability planning.

The concept of having access to knowledge and leading initiatives through a certificate course and program is very timely and valuable for working professionals in the forest and other natural resource sectors, and students hoping to enter the sectors. A certificate course and or program can offer the following:

- An alternative to a traditional full university graduate program, which would provide forestry and other professionals in both the public and private sectors with access to ongoing training, knowledge exchange, information dissemination and direct application in the field and/or within their organizations. Importantly, this could be done while balancing other work and family commitments.

- Means to accelerate the application of climate science into climate risk assessments, and the development and implementation of adaptation actions into management systems at both strategic and operational levels (within organizations). Further, these educational opportunities would help provide the business case for adaptation (including challenges/barriers/costs/benefits/social capital, etc.) and ultimately aid in building capacity for government and industry in the forest sector, leading to more resilient forests and management practices.

- Support for the understanding and dissemination of climate risks and adaptation measures being taken. This is timely given the interest from the financial
community, certification bodies, governments (regulators) and other partners.

- Providing a unique applied "boots on the ground" approach from real-life scenarios and professional experience would be very appealing to industry and natural resource professionals and this knowledge exchange is highly needed.

I would be happy to discuss further or answer any questions about the progress to date and the current interest from forestry professionals in climate change adaptation.

Sincerely,

Kate Lindsay
VP, Sustainability and Environmental Partnerships
November 14, 2020

Letter of support for:
Certificate Program Development — University of Saskatchewan, School of Environment and Sustainability

I encourage the University of Saskatchewan, School of Environment and Sustainability, to implement a certificate program focused on the Professional Climate Change Vulnerability Assessment and Business Case for Adaptation. This is an excellent opportunity for both practitioners and students to gain the knowledge and professional certification needed for integrating climate change in sustainable natural resource management and other aspects of environmental management and planning.

The mainstreaming of climate change thinking and practice into management and planning has been slow in coming. With over 30 years of climate change science available, we are overdue for incorporating that science in the management of public, private, and First Nations lands. This is critical in order to ensure the sustained production of goods, services, and values that are expected by Canadian citizens and the international community.

The well-conceived courses and program proposed by Dr. Sheri Andrews-Key comprise a unique curriculum, keeping USask on the cutting edge of innovation for its students. At present, students can take various courses that may inform them about climate change issues, but this new approach provides a coherent, integrated package. Furthermore, the new program appeals to environmental managers in the province, ensuring that USask education is directly informing on-the-ground applications in the natural resource sectors and beyond. Having those managers in the program would provide valuable interactions with undergraduate students, graduate students, and faculty.

The proposed courses provide a logical sequence of (1) climate change science (risk assessment), (2) climate change adaptation (risk management), and (3) business case development (implementation). This is conceptually sound, essentially the process that practitioners need to follow in order to integrate climate-related issues into business frameworks and actions. This sequence—and this way of thinking about issues—can be readily transferred from the classroom to the boardroom, planning discussions, financial discussions, and on-the-ground management actions.

This approach proposed for the certificate program has been implemented multiple times in recent years by Dr. Andrews-Key, one of the few people I know who has worked directly with forest industry to operationalize climate change in business practices. Her successes in doing this are opening doors in Canada, making connections with leading companies, Canadian Forest Service, and others. She is uniquely qualified to introduce a certificate program to USask and will ensure a well-trained new cohort of managers and students who will shape the natural resource industry and other enterprises for the challenges presented by climate change.

David L. Peterson
Professor and Emeritus Senior Scientist, U.S. Forest Service, Pacific Northwest Research Station
### Planning & Priorities Committee of Council

**Budgetary and Financial Implications (Master Worksheet) - New or Existing Program Proposal**

**Requirements:** To be completed for proposals of new academic programs or revisions to existing academic programs (including termination). Ensure this completed form is reviewed with Institutional Planning & Assessment prior to inclusion in the Notice of Intent submission to the Planning & Priorities Committee of Council.

**Instructions:**
1. Identify start-up costs in the Start-Up Costs worksheet, which will auto-calculate in the Master worksheet per below.
2. Identify limited term and ongoing revenue and expenditure estimates directly in the Master worksheet per below.
3. Areas shaded in grey denote required inputs. All other cells are auto-calculated.
4. For programs expected to generate a deficit in any given year, provide an explanation of how that deficit will be managed in future year(s) in order to ensure long-term financial sustainability.

#### Name of Program:

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition revenue:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total # of domestic students (headcount)</td>
<td>12</td>
<td>14</td>
<td>18</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Domestic tuition rate</td>
<td>$4,500.00</td>
<td>$4,725.00</td>
<td>$4,961.25</td>
<td>$5,110.09</td>
<td>$5,263.39</td>
</tr>
<tr>
<td>Total tuition revenue - domestic</td>
<td>$54,000.00</td>
<td>$66,150.00</td>
<td>$89,302.50</td>
<td>$76,651.35</td>
<td>$78,950.85</td>
</tr>
<tr>
<td>Total # of international students (headcount)</td>
<td>3</td>
<td>6</td>
<td>7</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>International tuition rate</td>
<td>$7,110.00</td>
<td>$7,465.50</td>
<td>$7,838.78</td>
<td>$8,073.94</td>
<td>$8,316.16</td>
</tr>
<tr>
<td>Total tuition revenue - international</td>
<td>$21,330.00</td>
<td>$44,793.00</td>
<td>$54,871.43</td>
<td>$121,109.13</td>
<td>$124,742.34</td>
</tr>
<tr>
<td>Student fees*</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Excursion</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Lab</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Other (list in Comments)</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Total student fees</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>External funding sources (list in Comments)</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Internal funding sources (list in Comments)</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td><strong>Total Revenue</strong></td>
<td>$75,330.00</td>
<td>$110,943.00</td>
<td>$144,173.93</td>
<td>$197,760.48</td>
<td>$203,693.19</td>
</tr>
</tbody>
</table>

<p>| <strong>Expenditures</strong> |        |
| Start-up costs | $13,000.00 |
| Development cost for third course ($8000) + $5000 marketing and promotion | n/a |
| Salary and benefits: |        |
| Faculty | $24,000.00 |
| Assumes 2% salary increase | $24,480.00 |
| Sessionals or limited term instructional support | $24,969.60 |
| Students | $25,468.99 |
| Staff | $25,978.37 |
| Honoraria | $24,000.00 |
| Total salary and benefits | $24,480.00 |
| $24,969.60 | $25,468.99 | $25,978.37 |
| Scholarships and bursaries |        |</p>
<table>
<thead>
<tr>
<th>Item</th>
<th>Marketing and promotion</th>
<th>Materials and supplies</th>
<th>Travel</th>
<th>Equipment and IT</th>
<th>Other costs (list in Comments)</th>
<th>Total Expenditures</th>
<th>Estimated Surplus or Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$37,000.00</td>
<td>$38,330.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$29,480.00</td>
<td>$81,463.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$29,969.60</td>
<td>$114,204.33</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$30,468.99</td>
<td>$167,291.49</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$30,978.37</td>
<td>$172,714.82</td>
</tr>
</tbody>
</table>

*Relates to fees revenue specific to the course or program (e.g. excursion, lab, materials, etc). Excludes compulsory institutional fees (e.g. Athletic, Recreation, etc.).

If deficit in any given year, explain how it will be managed

Notes:

For questions about this form, including review prior to submission to PPC, contact Lucy Vuong (Programs and Planning Officer, IPA) at lucy.vuong@usask.ca.
Consultation with the Registrar Form

This form is to be completed by the Registrar (or his/her designate) during an in-person consultation with the faculty member responsible for the proposal. Please consider the questions on this form prior to the meeting.

Section 1: New Degree / Diploma / Certificate Information or Renaming of Existing

1. Is this a new degree, diploma, or certificate?  
   Yes X No  
   Is an existing degree, diploma, or certificate being renamed?  
   Yes No X  
   If you've answered NO to each of the previous two questions, please continue on to the next section.

2. What is the name of the new degree, diploma, or certificate?  
   Grad Cert in Climate Change Vulnerability Assessment and Adaption Action - GCCCVA (suggested Banner code - 6 character maximum) and Grad Cert Climate Change (suggested Banner short degree description)  

3. What is the credential of this new degree, diploma, or certificate? [Example - D.M.D. = Doctor of Dental Medicine]  
   G. Cert.

4. If you have renamed an existing degree, diploma, or certificate, what is the current name?  

5. Does this new or renamed degree / diploma / certificate require completion of degree level courses or non-degree level courses, thus implying the attainment of either a degree level or non-degree level standard of achievement?  
   Degree level

6. If this is a new degree level certificate, can a student take it at the same time as pursuing another degree level program?  
   Yes X No

7. If YES, a student attribute will be created and used to track students who are in this certificate alongside another program. The attribute code will be:  
   CCVA and In Grad Cert in Climate Change? (4 chars & 30 chars max)

8. Which College is responsible for the awarding of this degree, diploma, or certificate?  
   College of Graduate and Postdoctoral Studies [GP - Graduate and Postdoc Studies - built in Banner]

9. Is there more than one program to fulfill the requirements for this degree, diploma, or certificate? If yes, please list these programs.  

10. Are there any new majors, minors, or concentrations associated with this new degree / diploma / certificate? Please list the name(s) and whether it is a major, minor, or concentration, along with the sponsoring department.  
    Major - Climate Change (CLCG - suggested new code) / School of Environment and Sustainability [SES]

11. If this is a new graduate degree, is it thesis-based, course-based, or project-based?
### Section 2: New / Revised Program for Existing or New Degree / Diploma / Certificate Information

1. Is this a new program?  
   Yes [X]  No  
2. Is an existing program being revised?  
   Yes  No [X]  

   If you've answered NO to each of the previous two questions, please continue on to the next section.

2. If YES, what degree, diploma, or certificate does this new/revised program meet requirements for?  
   Grad Cert in Climate Change Vulnerability Assessment and Adaption Action - GCCCVA (suggested Banner code) and Grad Cert Climate Change (suggested Banner short degree description)

3. What is the name of this new/revised program?  
   Graduate Certificate in Climate Change Vulnerability Assessment and Adaption Action - GCCCVA-GP (suggested Banner code - 12 character maximum) and Grad Cert Climate Change (suggested Banner description)

4. What other program(s) currently exist that will also meet the requirements for this same degree(s)?  
   N/A

5. What College/Department is the academic authority for this program?  
   College of Graduate and Postdoctoral Studies [GP] / School of Environment and Sustainability [SES]

6. Is this a replacement for a current program?  
   Yes  No [X]

7. If YES, will students in the current program complete that program or be grandfathered?  

8. If this is a new graduate program, is it thesis-based, course-based, or project-based?  
   Course-based

9. If this is a new non-degree or undergraduate level program, what is the expected completion time?
Section 3: Mobility

Mobility is the ability to move freely from one jurisdiction to another and to gain entry into an academic institution or to participate in a learning experience without undue obstacles or hindrances.

1 Does the proposed degree, program, major, minor, concentration, or course involve mobility?  
Yes [ ]  No [X]

If yes, choose one of the following:
- Domestic Mobility (both jurisdictions are within Canada)
- International Mobility (one jurisdiction is outside of Canada)

2 Please indicate the mobility type (refer to Nomenclature for definitions).
- Joint Program
- Joint Degree
- Dual Degree
- Professional Internship Program
- Faculty-Led Course Abroad
- Term Abroad Program

3 The U of S enters into partnerships or agreements with external partners for the above mobility types in order to allow students collaborative opportunities for research, studies, or activities. Has an agreement been signed?  
Yes [ ]  No [ ]

4 Please state the full name of the agreement that the U of S is entering into.

5 What is the name of the external partner?

6 What is the jurisdiction for the external partner?
Section 4: New / Revised Major, Minor, or Concentration for Existing Degree Information (Undergraduate)

1 Is this a new or revised major, minor, or concentration attached to an existing degree program?  
   Yes  No  X  Revised
   If you've answered NO, please continue on to the next section.
2 If YES, please specify whether it is a major, minor, or concentration. If it is more than one, please fill out a separate form for each.
3 What is the name of this new / revised major, minor, or concentration?
4 Which department is the authority for this major, minor, or concentration? If this is a cross-College relationship, please state the Jurisdictional College and the Adopting College.
5 Which current program(s), degree(s), and/or program type(s) is this new / revised major, minor, or concentration attached to?

Section 5: New / Revised Disciplinary Area for Existing Degree Information (Graduate)

1 Is this a new or revised disciplinary area attached to an existing graduate degree program?  
   Yes  No  X  Revised
   If you've answered NO, please continue on to the next section.
2 If YES, what is the name of this new / revised disciplinary area?
3 Which Department / School is the authority for this new / revised disciplinary area? (NOTE - if this disciplinary area is being offered by multiple departments see question below.)
4 Which multiple Departments / Schools are the authority for this new / revised disciplinary area?
4a Of the multiple Departments / Schools who are the authority for this new / revised disciplinary area and what allocation percentage is assigned to each? (Note - must be whole numbers and must equal 100.)
4b Of the multiple Departments / Schools who is the primary department? The primary department specifies which department / school policies will be followed in academic matters (ex. late adds, re-read policies, or academic misconduct). If no department / school is considered the primary, please indicate that. (In normal circumstances, a department / school with a greater percentage of responsibility - see question above - will be designated the primary department.)
5 Which current program(s) and / or degree(s) is this new / revised disciplinary area attached to?
N/A
Section 6: New College / School / Center / Department or Renaming of Existing

1 Is this a new college, school, center, or department?  
   Yes [ ]  No [X]  
Is an existing college, school, center, or department being renamed?  
   Yes [ ]  No [X]  
Is an existing college, school, center, or department being deleted?  
   Yes [ ]  No [X]  
If you've answered NO to each of the previous two questions, please continue on to the next section.

2 What is the name of the new (or renamed or deleted) college, school, center, or department? 

3 If you have renamed an existing college, school, center, or department, what is the current name? 

4 What is the effective term of this new (renamed or deleted) college, school, center, or department? 

5 Will any programs be created, changed, or moved to a new authority, removed, relabelled? 

6 Will any courses be created, changed, or moved to a new authority, removed, relabelled? 

7 Are there any ceremonial consequences for Convocation (i.e. New degree hood, adjustment to parchments, etc.)? 

Section 7: Course Information

1 Is there a new subject area(s) of course offering proposed for this new degree? If so, what is the subject area(s) and the suggested four (4) character abbreviation(s) to be used in course listings?  
No

2 If there is a new subject area(s) of offerings what College / Department is the academic authority for this new subject area?  

3 Have the subject area identifier and course number(s) for new and revised courses been cleared by the Registrar?  

4 Does the program timetable use standard class time slots, terms, and sessions? Yes X No X  
If NO, please describe.  
It's expected to be delivered online with condensed course offerings

5 Does this program, due to pedagogical reasons, require any special space or type or rooms? Yes X No X  
If YES, please describe.  
It's expected to be delivered online

NOTE: Please remember to submit a new "Course Creation Form" for every new course required for this new program / major. Attached completed "Course Creation Forms" to this document would be helpful.
## Section 8: Admissions, Recruitment, and Quota Information

1. **Will students apply on-line? If not, how will they apply?**
   - Yes

2. **What term(s) can students be admitted to?**
   - YYYY05, YYYY09, YYYY01

3. **Does this impact enrollment?**
   - Slight increase - within 2 years expect enrolment of approximately 30 students per year

4. **How should Marketing and Student Recruitment handle initial inquiries about this proposal before official approval?**
   - Refer to the School of Environment and Sustainability

5. **Can classes towards this program be taken at the same time as another program?**
   - Yes

6. **What is the application deadline?**
   - As per current

7. **What are the admission qualifications? (IE. High school transcript required, grade 12 standing, minimum average, any required courses, etc.)**
   - A 4 year undergraduate degree, or equivalent, from a recognized college of university in an academic discipline relevant to the proposed field of study OR a 3 year first cycle undergraduate degree in an academic discipline relevant to the proposed field of study from an institution meeting the criteria set forth in the Bologna Declaration will be accepted as the equivalent of an undergraduate degree.
   - Minimum cumulative weighted average of at least 70% (U of S grade system equivalent) in the last 2 years of study (60 credit units).
   - Proof of English proficiency may be required for international applicants and for applicants who first language is not English. A minimum overall TOEFL score of 86, a minimum overall IELTS score of 6.5 or another approved test as outlined in the College of Graduate and Postdoctoral Studies.
   - Statement of Intent.
   - Letters of Reference.

8. **What is the selection criteria? (IE. If only average then 100% weighting; if other factors such as interview, essay, etc. what is the weighting of each of these in the admission decision.)**

9. **What are the admission categories and admit types? (IE. High school students and transfer students or one group? Special admission? Aboriginal equity program?)**

10. **What is the application process? (IE. Online application and supplemental information (required checklist items) through the Admissions Office or sent to the College/Department?)**
    - Online application; checklist items: undergraduate degree, proof of English proficiency (if applicable), statement of intent, 3 letters of reference

11. **Who makes the admission decision? (IE. Admissions Office or College/Department/Other?)**
    - College of Graduate and Postdoctoral Studies

12. **Letter of acceptance - are there any special requirements for communication to newly admitted students?**
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will the standard application fee apply?</td>
<td>Yes</td>
</tr>
<tr>
<td>Will all applicants be charged the fee or will current, active students be exempt?</td>
<td>All applicants will be charged</td>
</tr>
<tr>
<td>Are international students admissible to this program?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

If YES, what is the tuition amount for the first 12 months for a full-time international student? This information is required for the Immigration, Refugees and Citizenship Canada [IRCC] form (this form is for students who need to get a visa to study here).

$4,500 (all 3 classes in 1 year)
Section 9: Government Loan Information

NOTE: Federal / provincial government loan programs require students to be full-time in order to be eligible for funding. The University of Saskatchewan defines full-time as enrollment in a minimum of 9 credit units (operational) in the fall and/or winter term(s) depending on the length of the loan.

1. If this is a change to an existing program, will the program change have any impact on student loan eligibility?

2. If this is a new program, do you intend that students be eligible for student loans?
   Yes

Section 10: Convocation Information (only for new degrees)

1. Are there any 'ceremonial consequences' of this proposal (ie. New degree hood, special convocation, etc.)?
   No

2. If YES, has the Office of the University Secretary been notified?

3. When is the first class expected to graduate?
   Could be as early as 202209 (Fall Convocation 2022)

4. What is the maximum number of students you anticipate/project will graduate per year (please consider the next 5-10 years)?
   30

Section 11: Schedule of Implementation Information

1. What is the start term?
   202205 [May 2022]

2. Are students required to do anything prior to the above date (in addition to applying for admission)?
   Yes [ ] No [X]
   If YES, what and by what date?
Section 12: Registration Information

1. What year in program is appropriate for this program (NA or a numeric year)?
   (General rule = NA for programs and categories of students not working toward a degree level qualification.)
   As per current set-up for graduate students

2. Will students register themselves?
   Yes [X] No [ ]
   If YES, what priority group should they be in?
   As per current set-up for graduate students

Section 13: Academic History Information

1. Will instructors submit grades through self-serve?
   Yes [X] No [ ]

2. Who will approve grades (Department Head, Assistant Dean, etc.)?
   As per current set-up

Section 14: T2202 Information (tax form)

1. Should classes count towards T2202s?
   Yes [X] No [ ]

Section 15: Awards Information

1. Will terms of reference for existing awards need to be amended?
   Yes [ ] No [X]

2. If this is a new undergraduate program, will students in this program be eligible for College-specific awards?
   Yes [X] No [ ]

Section 16: Government of Saskatchewan Graduate Retention (Tax) Program

1. Will this program qualify for the Government of Saskatchewan graduate retention (tax) program?
   Yes [X] No [ ]
   To qualify the program must meet the following requirements:
   - be equivalent to at least 6 months of full-time study, and
   - result in a certificate, diploma, or undergraduate degree.
### Section 17: Program Termination

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is this a program termination?</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>If yes, what is the name of the program?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is the effective date of this termination?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Will there be any courses closed as a result of this termination?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If yes, what courses?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are there currently any students enrolled in the program?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If yes, will they be able to complete the program?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If not, what alternate arrangements are being made for these students?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When do you expect the last student to complete this program?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there mobility associated with this program termination?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If yes, please select one of the following mobility activity types.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dual Degree Program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joint Degree Program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internship Abroad Program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Term Abroad Program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taught Abroad Course</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Exchange Program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partnership agreements, coordinated by the International Office, are signed for these types of mobility activities. Has the International Office been informed of this program termination?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
### Section 18: Proposed Tuition and Student Fees Information

1. **How will tuition be assessed?**

<table>
<thead>
<tr>
<th>Standard Undergraduate per credit</th>
<th>Standard Graduate per credit</th>
<th>Standard Graduate per term</th>
<th>Non standard per credit</th>
<th>Non standard per term</th>
<th>Other</th>
<th>Program Based</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
   
   * See attached documents for further details

   **NOTE:** Proposed tuition is $500/credit unit or $1,500/3 credit unit class.

2. **If fees are per credit, do they conform to existing categories for per credit tuition? If YES, what category or rate?**
   - No

3. **If program based tuition, how will it be assessed? By credit unit? By term? Elsehow?**
   - N/A

4. **Does proponent's proposal contain detailed information regarding requested tuition?**
   - Yes [X] No 

5. **What is IPA's recommendation regarding tuition assessment? When is it expected to receive approval?**

6. **IPA Additional comments?**

7. **Will students outside the program be allowed to take the classes?**
   - Yes

8. **If YES, what should they be assessed? (This is especially important for program based.)**
   - Students pursuing this certificate will be assessed the $500/credit unit and students in a program that assesses tuition by program would pay their regular tuition (so students in the same class will be paying different tuition)

9. **Do standard student fee assessment criteria apply (full-time, part-time, on-campus versus off-campus)?**
   - Yes

10. **Do standard cancellation fee rules apply?**
    - Yes

11. **Are there any additional fees (e.g. materials, excursion)? If yes, see NOTE below.**
    - No

12. **Are you moving from one tuition code (TC) to another tuition code?**
    - Yes [X] No

13. **Are international students admissible to the program? If yes, will they pay the international tuition differential?**
    - Yes - will pay the standard international tuition differential for the year

**NOTE:** Please remember to submit a completed "Application for New Fee or Fee Change Form" for every new course with additional fees.
## Section 19: TLSE - Information Dissemination (internal for TLSE use only)

1. Has TLSE, Marketing and Student Recruitment, been informed about this new / revised program?  
   - Yes  
   - No

2. Has TLSE, Admissions, been informed about this new / revised program?  
   - Yes  
   - No

3. Has TLSE, Student Finance and Awards, been informed about this new / revised program?  
   - Yes  
   - No

4. Has CGPS been informed about this new / revised program?  
   - Yes  
   - No

5. Has TLSE, Transfer Credit, been informed about any new / revised courses?  
   - Yes  
   - No

6. Has ICT-Data Services been informed about this new or revised degree / program / major / minor / concentration?  
   - Yes  
   - No

7. Has the Library been informed about this new / revised program?  
   - Yes  
   - No

8. Has ISA been informed of the CIP code for new degree / program / major?  
   - Yes  
   - No

9. Has Room Scheduling/Scheduling Hub/Senior Coordinator of Scheduling been informed of unique space requirements for the new courses and/or informed of program, course, college, and department changes?  
   - Yes  
   - No

10. Has the Convocation Coordinator been notified of a new degree?  
    - Yes  
    - No

11. What is the highest level of financial approval required for this submission? Check all that apply.
    a. None - as it has no financial implications  
    b. Fee Review Committee  
    c. Institutional Planning and Assessment (IPA)  
    d. Provost's Committee on Integrated Planning (PCIP)  
    e. Board of Governors  
    f. Other

### SIGNED

<table>
<thead>
<tr>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registrar (Russell Isinger):</td>
</tr>
<tr>
<td>College Representative(s):</td>
</tr>
<tr>
<td>IPA Representative(s):</td>
</tr>
</tbody>
</table>