

# Academic Working Group on Sustainability Submission to IARP

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## Introduction

The academic study of sustainability presents particular challenges to academic planning because the concept – one that is necessarily contested and debated<sup>1</sup> – touches all academic disciplines. Studying sustainability is interdisciplinary. An institution-wide effort is required to ensure that The University of Winnipeg's curriculum reflects up-to-date scholarship and provides quality sustainability learning to students.

The Academic Working Group on Sustainability is currently the body that considers academic matters related to the University's sustainability commitments. It is comprised of members from across University departments and receives secretarial support from the Campus Sustainability Office. It provides annual reports to Senate. Current members include:

- Devin Latimer – Chemistry
- Alan Diduck – Environmental Studies and Sciences
- Royden Loewen – History
- Lee Anne Block – Education
- Andrew Park – Biology

Between 2013 and 2016, the Working Group conducted an internal environmental scan to understand the state of current sustainability teaching and research on campus. The committee also researched activities at other Canadian universities. This survey of external institutions was intended (1) to provide ideas for how UWinnipeg might encourage quality teaching and research related to sustainability and (2) to understand how UWinnipeg's current activity compares to institutions elsewhere in Canada. The recommended goals, vision and actions below reflect this research.

## Recommended Vision for Sustainability in Teaching and Research

1. Students have access to a high-quality, diverse set of courses throughout University departments that address the range of definitions, concepts, principles, models, and approaches to the contested notions of sustainability and sustainable development;

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<sup>1</sup> The Academic Working Group has been deliberate in not defining sustainability. The concept of sustainability carries many meanings and interpretations and it is the role of a university to contribute to the ongoing development of debates about key terms and concepts. No single definition of sustainability should constrain academic activity related to sustainability at UWinnipeg. Rather, UWinnipeg should be a place for lively dialogue and challenging discussions about the meaning of "issues of the day".

2. Students graduate from UWinnipeg with hands-on, real world experience implementing sustainability through course work and through appropriately mentored co-curricular projects on campus and/or in the community;
3. Members of faculty are supported and encouraged in efforts to integrate new sustainability-related material into existing courses or in introducing new courses that address sustainability;
4. Members of faculty conduct sustainability research that has an impact on existing sustainability challenges both alone and as members of interdisciplinary teams.

## Summary of Recommended Actions

Recommendations are listed here, and are provided again below with further explanation and discussion.

1. Develop a clear plan for ensuring high-quality sustainability curricula throughout University departments by building on research of the Academic Working Group on Sustainability. Include in this planning process an investigation of the possibility of a sustainability credit requirement analogous to the Indigenous credit requirement.
2. Establish a rotating teaching chair in subjects related to academic priorities at UWinnipeg, including sustainability and indigenization, and explore other programs aimed at developing UWinnipeg faculty members as educators.
3. Establish new internal funding opportunities, and/or open up funding restrictions on internal research and start-up grants for new faculty, to enable members of faculty to access funds to develop new teaching methods, to hold workshops related to pedagogy, and to develop new curriculum related to sustainability and other academic priorities.
4. Develop interdisciplinary and co-teaching opportunities to enhance the potential of sustainability courses.

## Details of Recommended Actions

Between 2013 and 2016, the Academic Working Group on Sustainability conducted research to identify approaches to ensuring high-quality sustainability curriculum throughout University departments. This work included a scan of approaches used in other universities as well as the compilation of an inventory of courses that either include a unit on sustainability or that treat, as a central theme, the concept of sustainability.<sup>2</sup> The recommendations included here are the result of this research.

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<sup>2</sup> To develop this inventory, first a scan of the course calendar was undertaken. The initial criterion was that a course had to mention the term 'sustainability' in an explicit and meaningful way in the course description. This scan turned up 35 courses that were sustainability-focused (i.e. sustainability is a central theme throughout the course or the theme of the course) or sustainability-related (i.e. sustainability is treated in a unit of the course). In the second phase of the project, department chairs and selected contacts were approached in all University departments to either confirm or expand the findings from the course calendar. This process turned up 105 courses that were sustainability-focused or -related (this includes the 35 identified through the course calendar). A

**Recommendation 1: Develop a clear plan for ensuring high-quality sustainability curricula throughout University departments by building on research of the Academic Working Group on Sustainability. Include in this planning process an investigation of the possibility of a sustainability credit requirement analogous to the Indigenous credit requirement.**

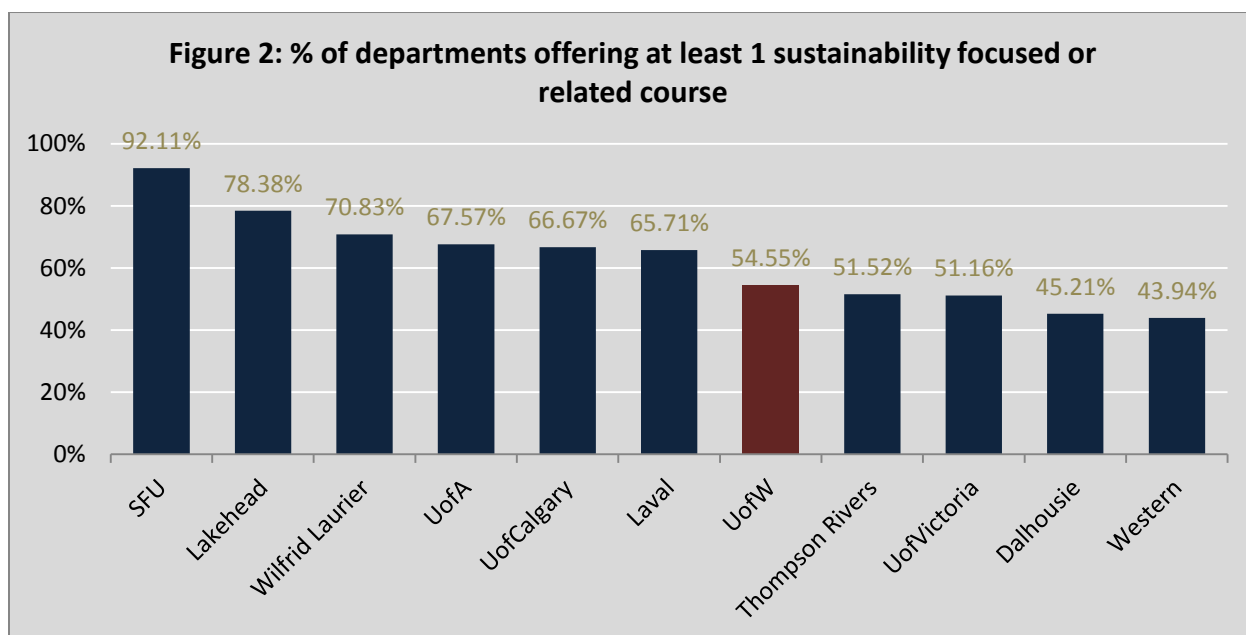
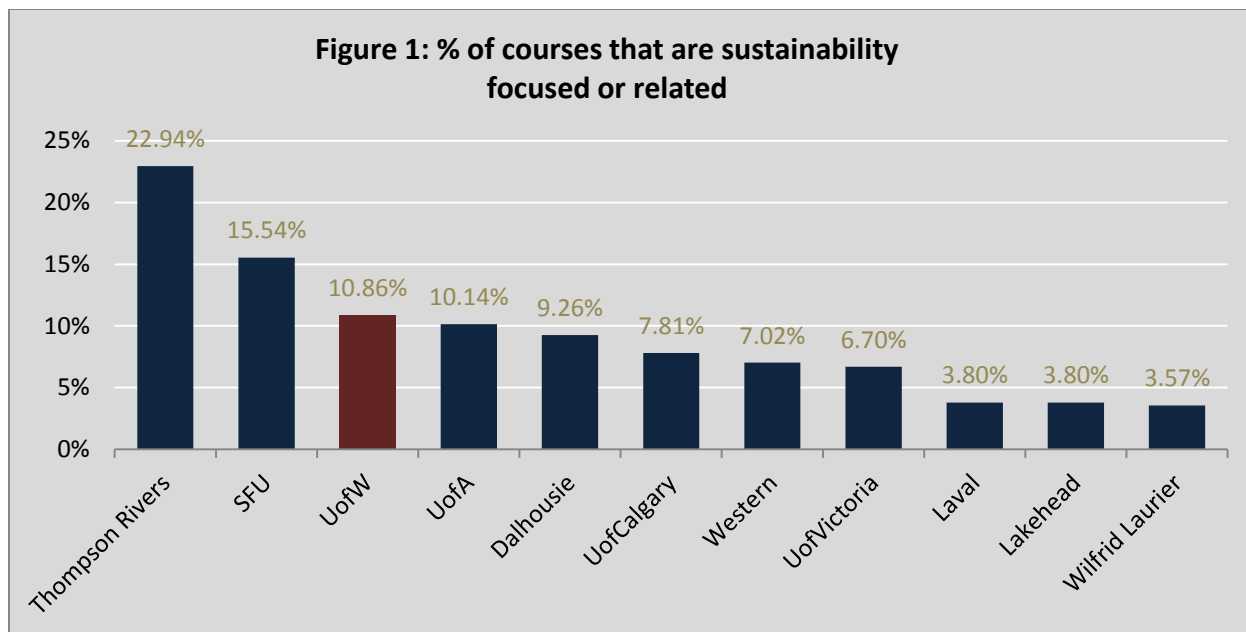
With the UN's Sustainable Development Goals, increasing recognition of tensions between current models of economic development and environmental degradation, and growing calls for social and environmental justice around the world, the academic study of sustainability is growing. Studying and understanding sustainability and sustainable development present particular challenges to academic planning because sustainability problems and solutions cannot be treated adequately by one academic discipline alone. It touches all disciplines and it requires substantial inter-disciplinary teaching and research, including the development of new concepts, theories, methods and pedagogy that span traditional disciplinary boundaries. An institution-wide effort is required to ensure that The University of Winnipeg's curriculum reflects up-to-date scholarship and provides high-quality sustainability learning to students.

A first step in ensuring breadth and quality of curriculum is understanding UWinnipeg's current sustainability related course offerings. The two figures below show the breadth or extent of our sustainability curriculum relative to the universities in our selected comparison group.<sup>3</sup> Overall, UWinnipeg falls within the range found at other universities with respect to both % of courses that are sustainability focused or related and % of departments offering at least one sustainability focused or related course.

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further follow up with departments that had not responded in 2014 was completed in 2015. It is likely that the inventory is still incomplete and imperfect; however, it is the best data we have.

<sup>3</sup> Data from comparison universities were available through the Sustainability Tracking, Assessment and Rating System (STARS). Not all Canadian universities report through STARS, and few Canadian universities of our size do. Within our 'peer group' ('primarily undergraduate' universities) the only Canadian data available were for Lakehead and Thompson Rivers. We also examined reports from Canadian universities that have been recognized as sustainability leaders by earning a STARS Gold rating. These were Dalhousie, Simon Fraser, University of Alberta, University of Calgary, University of Victoria, Laval, Wilfrid Laurier, and Western. It is important to note that while all institutions use the same guidelines for developing their inventories, there is substantial room for interpretation in determining what 'counts' as a sustainability course. These data are imperfect. But they are indicative and can provide UWinnipeg with a broad-strokes impression of our current sustainability curriculum as it compares to other Canadian institutions.



Sustainability course inventories of other institutions were also examined to understand the distribution of sustainability content within different areas of academic study. We found that sustainability courses were offered across an array of social and natural sciences as well as the humanities. In most universities, Biology, Environmental Studies/Sciences, and Geography departments offered the most classes with sustainability content. Our analysis also revealed the ranges of the % of courses with sustainability content for those academic departments most likely to offer such courses (Table 1). UWinnipeg is within the range for the 'common' departments that offer sustainability content. UWinnipeg's department of Anthropology offers the greatest proportion of sustainability content that

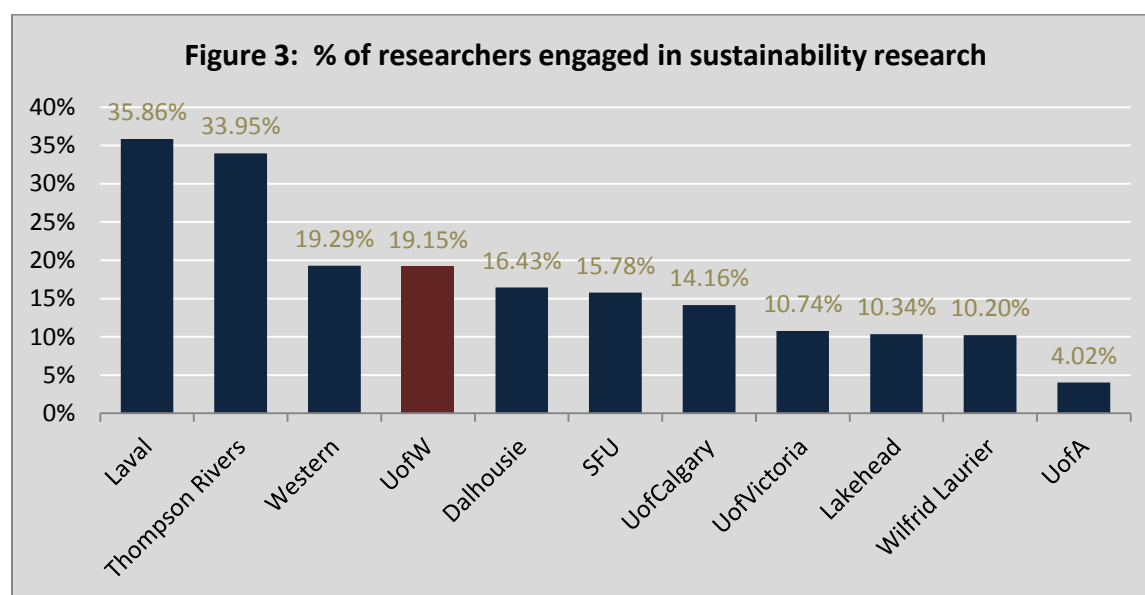
any other Anthropology departments in our comparison group. Our department of Sociology offers the smallest proportion of sustainability content in our comparison group.

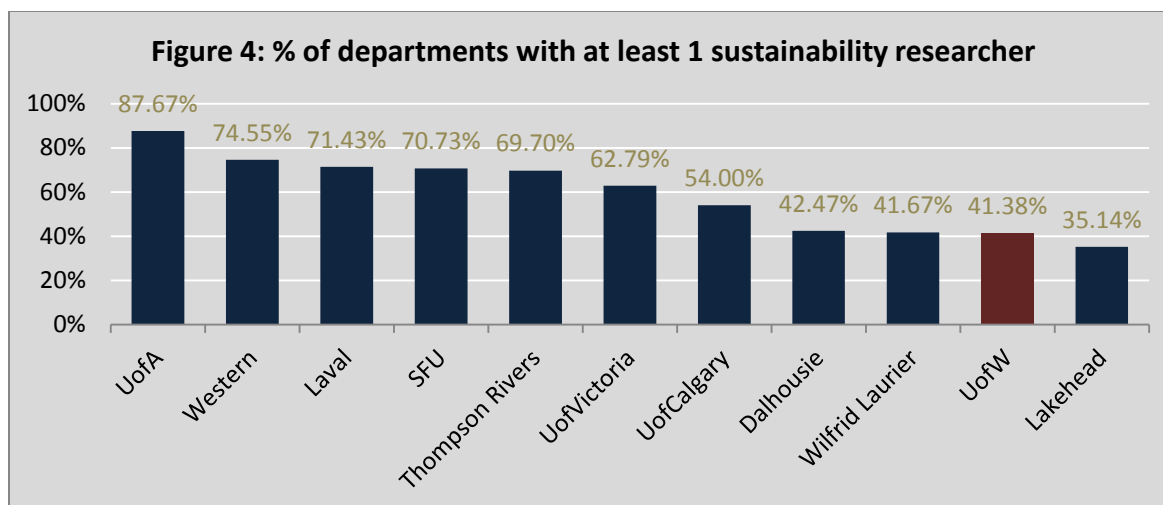
The top departments in terms of content offered at UWinnipeg (in order, all >5%) are: Masters in Development Practice, Environmental Studies and Sciences, Biology, Geography, International Development Studies, Anthropology, Business, and History. Many of those are on the 'common' department list, meaning UWinnipeg is similar to other institutions. MDP is fairly unique to UWinnipeg.

**Table 1: range in % of courses that are sustainability focussed or related for the 11 departments most likely to offer sustainability content.**

Department	Lowest %	Highest %	UWinnipeg %
Anthropology	0	6.25	6.25
Biology	5.12	13.50	9.13
Business	1.40	9.09	6.25
Chemistry	0	3.07	1.44
Economics	0.70	4.55	2.88
Environmental Studies/Sciences	1.94	12.34	10.10
Geography	5.80	20.06	9.13
History	0.65	6.13	5.77
Philosophy	0	2.73	1.92
Politics	0	3.07	1.92
Sociology	0.48	3.25	0.48

Figures 3 and 4 shed light on the extent and distribution of sustainability research at UWinnipeg and how UW compares to universities in our comparison group. Figure 3 shows that UWinnipeg ranked fourth in terms of % of researchers engaged in sustainability research and Figure 4 reveals that sustainability research at UWinnipeg is more concentrated in specific departments than is the case elsewhere.





The high concentration of sustainability research in a relatively small number of departments points to an opportunity to expand interdisciplinary sustainability research at UWinnipeg.

These results provide a baseline from which UWinnipeg can build when considering the question of how to ensure that students have access to a high-quality, diverse set of courses and teaching methods throughout University departments that address the range of definitions, concepts, principles, models, and approaches pertinent to the contested notions of sustainability and sustainable development. The results can also help us consider how to support members of faculty in conducting sustainability research both alone and as members of interdisciplinary teams.

Further steps are required. Several Universities across Canada have used data similar to those outlined above to establish specific targets for improving the quality and the quantity of sustainability teaching and research at their institutions. These include:

#### University of Calgary

- Sustainability has been confirmed as one of the University of Calgary's core values as outlined in *Eyes High*, the institution's strategic vision, and has been further confirmed as one of seven academic priorities in their 2012 Academic Plan.<sup>4</sup> Targets include:
  - Increase the amount of faculty members involved in sustainability research relative to 2013 baseline levels of 14.16%.
  - Increase the number of Departments involved in sustainability research relative to 2013 baseline levels of 54%.
  - Increase sustainability-focused and sustainability-related courses relative to 2013 baseline levels of 1.21% and 6.61%, respectively.
  - Increase the number of Departments offering sustainability courses relative to 2013 baseline levels of 66.67%.

<sup>4</sup> <http://www.ucalgary.ca/provost/files/provost/academicplan2012.pdf>

### **The University of British Columbia**

- Aims to provide each student, regardless of their degree program, with access to sustainability education.
- Aims to use the Campus as a Living Laboratory to create six research and partnership activities that support sustainability, and recognize multiple forms of sustainability teaching and learning through co-curricular opportunities.
- Aims to increase the number of interdisciplinary sustainability research projects at UBC funded by the flagship research programs of the major funding Councils and other programs.

### **Simon Fraser University**

- Aims to develop a Living Lab Program coordinated jointly by staff from operational, academic and research departments by 2016.
- Aims to develop guiding principles to assist with the design of environmentally, economically and socially sustainable research projects and experiments by 2016.
- Aims to ensure students have multiple opportunities to be exposed to sustainability concepts as part of their curricular and co-curricular activities at SFU by 2016.

### **University of Alberta**

- Published a companion document to the Academic Plan entitled *Integrating Sustainability into the Academic Experience*.<sup>5</sup>
- Aims to develop a sustainability certificate that enables students to pursue multiple interests and interdisciplinary learning by 2016.
- Aims to expand the number of graduates that are exposed to programs that have sustainability learning outcomes by 2016.

### **Western University**

- The Building Sustainable Value Research Centre<sup>6</sup> at the Richard Ivey School of Business at Western has an objective to establish one new sustainability course each year. A minimum number of sustainability-related courses are required to achieve the Sustainability Certificate in the HBA program.

At UWinnipeg, we can consider the example of both the Indigenous Credit Requirement and of the Experiential Learning Fund to note two examples of how other academic areas that do not fit into a single department have been supported and encouraged institutionally.

The discussion document for the IARP consultation notes that “both sustainability and indigenization cut across all academic departments and student support units.” The University’s Strategic Directions document recognizes sustainability as a lens applied to all practices and processes to guide University activities, both academic and operational.

The Indigenous Credit Requirement appears to represent the University’s first core target with respect to integrating Indigenization into academic life at UWinnipeg. There has yet to be a similar clear target or effort made to systematically ensure that excellent quality and a good quantity of sustainability

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<sup>5</sup> <http://www.provost.ualberta.ca/~media/provost/Documents/Academic%20Plan/IntegratingSustainability.pdf>

<sup>6</sup> <http://www.ivey.uwo.ca/sustainability/>

learning is also integrated into the UWinnipeg curriculum. The Academic Working group supports diffusing sustainability throughout the curriculum and recommends that work in this area should be done in a way that avoids tokenistic inclusion of sustainability in courses.

This is why the Academic Working Group on Sustainability recommends that the University develop a clear plan for ensuring high-quality sustainability curricula throughout University departments by building on our research, and that the University include in this planning process an investigation of the possibility of a sustainability credit requirement analogous to the Indigenous credit requirement.

**Recommendation 2: Establish a rotating teaching chair in subjects related to academic priorities at UWinnipeg, including sustainability and indigenization and explore other programs aimed at developing high-quality pedagogy and course content.**

The University needs to demonstrate levels of support for excellence in teaching that are commensurate with support for research. UWinnipeg needs to enhance its initiatives that encourage teachers to develop their skills. UWinnipeg needs supports that enable educators to integrate new subjects (sustainability, Indigenous content) and approaches (experiential learning, online learning) into their courses. Teaching excellence and research are not dichotomous. There are various ways that we can acknowledge, recognize, support, and utilize teaching expertise as a resource for practice, research and action in sustainability and Indigenization.

### Structural Efforts

- At St. Mary's University, during the 2010-2011 academic year, the university teaching scholar<sup>7</sup> program focused on 'Sustainability Across the Curriculum.' The teaching scholar was awarded a one full year course release to work with her colleagues and faculty members across campus to encourage and assist them in integrating sustainability as a theme into their course curriculum and their course delivery.
- Dalhousie's College of Sustainability<sup>8</sup> has an arrangement where the College recruits members from various faculties across the university to become core course instructors. These faculty members commit one-third of their teaching to the College of Sustainability for 3 years. The College sends the 'home' departments of these cross-appointed faculty members one-third of their salary to cover the part of their position that is committed to the College, for that three year period. Money is provided for Research Assistants who support the professors in the development of the new material/course content.<sup>9</sup>

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<sup>7</sup> <http://www.smu.ca/academics/caid-awards-and-grants.html>

<sup>8</sup> <http://www.dal.ca/faculty/sustainability.html>

<sup>9</sup> <http://www.dal.ca/faculty/sustainability/programs/ess/cross-appointed-faculty.html>



## Workshops

- A Faculty Development Workshop on “Broadening Participation in Sustainability Education and Research”<sup>10</sup> was offered at the University of Alberta to generate ideas and identify opportunities to broaden sustainability education and research at the University of Alberta.
- The University of Alberta’s Festival of Teaching<sup>11</sup> is a year-round celebration of excellence and innovation in teaching. The 2014 Festival of Teaching examined the question of sustainable teaching and learning.
- In 2014, the Centre for Place and Sustainability Studies at Lakehead<sup>12</sup> coordinated a grant funded (SSHRC) workshop designed to build community among an interdisciplinary group of colleagues with diverse commitments to sustainability, broadly defined. All 23 participants were eligible to receive a research budget of \$10,000 to help further integrate sustainability into their work.

## Resources

- The Centre for Academic and Instructional Development<sup>13</sup> at St. Mary’s University maintains a resource collection of books and journals available for loan to interested faculty members. This collection now contains a selection of resources to assist and support individuals with the integration of sustainability principles into their course curricula.

## Recognition Awards

- Through the Sustainability ON Awards,<sup>14</sup> UCalgary highlights the success of faculty, staff and students who are advancing sustainability, including faculty who are finding innovative and inspiring ways to incorporate sustainability in the courses they teach. UWinnipeg also has a Campus Sustainability Award and faculty are eligible based on their efforts in the classroom. No member of faculty has ever been nominated.

The Academic Working Group encourages UWinnipeg to consider these examples from other universities. In many respects, establishing a teaching chair would be an excellent first step because it would enable many of the other initiatives. The teaching chair could be responsible for developing workshops, resources, and other development opportunities for faculty. A teaching chair would have to work across disciplines, which would also increase opportunities for interdisciplinary research. This is why we recommend that the University establish a rotating teaching chair in subjects related to academic priorities at UWinnipeg, including sustainability and Indigenization, and explore other programs aimed at developing high-quality pedagogy and course content.

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<sup>10</sup> <http://www.sustainability.ualberta.ca/en/EducationResearch/Initiatives.aspx>

<sup>11</sup> <http://www.ctl.ualberta.ca/teaching-events/festival-teaching>

<sup>12</sup> <http://www.placecentre.org/>

<sup>13</sup> <http://www.smu.ca/academics/caid.html>

<sup>14</sup> <http://www.ucalgary.ca/sustainability/awards>

**Recommendation 3: Establish new internal funding opportunities, or open up funding restrictions on internal research and start-up grants for new faculty, to enable members of faculty to access funds to develop new teaching methods, to hold workshops related to pedagogy, and to develop new curriculum related to sustainability and other academic priorities.**

Faculty members' ability to access funds in support of curriculum or pedagogy development is currently quite limited. While several internal programs exist to support research, there are no equivalent programs to support teaching. This problem should be solved. One approach to addressing this challenge could be to establish a seed granting program for each of the University's five faculties that supports educators in developing their teaching in strategic areas (i.e. sustainability, indigenization, experiential learning, and online learning). UWinnipeg would not be alone in creating these types of funding opportunities.

- A portion of the Laval Sustainable Development Fund is dedicated to a program to help members of faculty enhance course content by incorporating a sustainable development dimension.
- Eligible projects under the University of Alberta Sustainability Enhancement Fund<sup>15</sup> must improve sustainability on campus in the following areas: outreach and engagement, teaching, research and improvements to facilities and operations.
- Members of faculty may apply to the Thompson Rivers University Sustainability Grant Fund<sup>16</sup> for any purposes related to the development of sustainability-related courses.
- The University of Alberta Community Service Learning Partnership Grant<sup>17</sup> provides two-year partnerships between university instructors and community organizations in the Edmonton region that engage groups of UofA students across disciplines with a primary focus on either a social change project or community-based research. Its purpose is to incubate innovative learning projects.
- The Interdisciplinary Development Initiatives Program<sup>18</sup> at Western provides seed funding for projects that further Western's research and teaching mission, attract scholars and graduate students to the University, and bring prestige to Western. From 2009-2012, funding (\$500,000) was awarded on a one-time basis for a three year period to the Centre for Environment and Sustainability. This funding resulted in furthering the Masters in Environment and Sustainability program and significantly increasing the enrollment rate for the 2013-2014 academic year.

Just as new researchers require support to get their research programs running smoothly, new and more experienced faculty can benefit from targeted funding to help them develop their teaching. Funding can be used for course releases, to pay for workshops and trainings, or for other expenses related to developing curriculum and teaching methods. There is currently an asymmetry in the way UWinnipeg allocates internal funds – research is funded, developing teaching is not. This needs to

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<sup>15</sup> <http://sustainability.ualberta.ca/sef>

<sup>16</sup> <http://www.tru.ca/sustain/initiatives/funds.html>

<sup>17</sup> <http://www.csl.ualberta.ca/en/Community%20Partners/CSL%20Grants.aspx>

<sup>18</sup> <http://provost.uwo.ca/idi/index.html>

be rectified, especially in those areas that are recognized institutional priorities and that are by their very nature interdisciplinary.

**Recommendation 4: Develop interdisciplinary and co-teaching opportunities to enhance the potential of sustainability courses.**

Education for sustainability requires a holistic approach moving beyond the limitations of working solely within single academic disciplines. Because of this, the Working Group recommends facilitating interdisciplinary education by encouraging greater interdepartmental collaboration and establishing effective and fair methods for assigning, tracking and evaluating co-teaching. Co-teaching strengthens cross-disciplinary learning by providing students the opportunity to see how two members of faculty from different areas work together to address key academic questions. Co-teaching can also create space for developing interdisciplinary research programs by supporting the cultivation of academic partnerships. Some systemic change would be required to remove barriers for co-teaching courses.

In many respects, the semester system locks faculty into a particular pattern of activity and there are no clear rules for how teaching parts of a course is rewarded. Efforts must be made to make teaching schedules more flexible and faculty rewards systems more responsive. This kind of flexibility and responsiveness could, for instance, allow for a faculty member to plan, develop, teach and evaluate four classes in a 12-week course and receive credit for 1/3 of a 0.5 FCE. Alternatively, some courses could be taught in modular fashion - skills based courses come to mind that might not contain enough material for a whole course. This type of teaching might involve a new kind of support for a course – a course that involves lectures from several different members of faculty would still require a course coordinator. This role might be fulfilled by a member of non-academic staff or a TA or by a leading member of faculty.

The University should establish interdepartmental and interfaculty venues for discussing and creating teaching partnerships. We must also create tools, methods and an overall system to accommodate co-teaching within the senate approved teaching evaluation system. In doing this work, it will be important to ensure there is not a loss of “teaching power” within a department or faculty, i.e., there must be fair quid pro quo among departments and faculties.

## **Appendix A : Full Course Inventory**

Included as an attachment

## **Appendix B: Full Research Inventory**

Included as an attachment