This handbook was created by the University of Manitoba’s Office of Sustainability as an informational tool for communicating and coordinating the Living Lab - a program that connects students to applied sustainability research projects on campus for course credit or volunteer hours.

Office of Sustainability
501 Fitzgerald Building
(204) 474-6121
sustainability@umanitoba.ca
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WHAT IS A LIVING LAB?

University of Manitoba’s Living Lab connects faculty and staff with students who are passionate about solving sustainability challenges on campus through research projects. The Office of Sustainability helps to coordinate these initiatives while providing a platform for the community to access the completed research. This program promotes a culture of sustainable change through growth, education, and action. As the University seeks to become a leader in campus sustainability, the participation of faculty, staff, and students in sustainability planning and initiatives will be critical to innovation and achievement.
There is more than one way to get involved with the Living Lab program. Since faculty, staff, and students each take a different role in the execution of a research initiative, you can choose the method that best matches your desired involvement. There are different responsibilities and commitments, depending on your individual role in a project.

**DEVELOP A PROJECT IDEA**

Do you have a project idea that could help solve a sustainability challenge on campus or research area would benefit from the assistance of a student? Talk to your Professor/Instructor or contact the Office of Sustainability. Then, fill out a *Project Description Form* - found in the ‘Forms’ section of the handbook or online at umanitoba.ca/sustainability - to initiate your project idea. This is the first step in the lifecycle of an Living Lab project and can be undertaken by a student, faculty member, or staff person. The Office of Sustainability can help with research question design and methods. All projects will be reviewed to ensure the necessary ethics approval, safety measures, and permissions are in place.

**BROWSE THE LIVING LAB LAUNCH PAD**

Are you a student looking to get involved with a project that is yet to be completed? Visit the Living Lab Launch Pad at umanitoba.ca/sustainability for a complete list of projects actively seeking help. Projects are grouped by respective sustainability aspects, making it easy to find the type of work that interests you. See the ‘Sustainability Legend’ (p. 10) to learn more.

**USE THE LIVING LAB REPORTS**

Faculty, staff, and students are encouraged to build and act on the results of completed Living Lab projects. Visit the Library at umanitoba.ca/sustainability to see the submitted reports.

**CONTACT THE OFFICE OF SUSTAINABILITY**

Are you looking to support sustainability initiatives on campus but are unsure of how to best contribute to a project? Contact the Office of Sustainability and talk to us directly about formalizing a project idea or getting involved in whatever way you can. Contact the Office by phone at (204) 474-6121 or by email at sustainability@umanitoba.ca.
COMMITMENT AS A PROJECT SPONSOR:
• Define projects that meet operational needs for advancing sustainability
• Attend initial meeting with project team (student(s), faculty, and Office of Sustainability Staff) to define project plan, receive background project information, agree upon scope and timelines, and expected deliverables
• Provide quick feedback for students and an overall evaluation of project material
• Attend student presentation of research/recommendations
• Review final student reports and, in discussion with the Office of Sustainability Staff, identify how recommendations may be implemented or inform decision-making

COMMITMENT AS THE OFFICE OF SUSTAINABILITY:
• Connect students with the project and faculty members that will meet their research interests and needs
• Offer support and guidance to students, faculty, and staff
• Facilitate the required approvals (ethics, etc.), and project connections between parties
• Collect, store, and help to communicate all project details and information.
• Coordinate student participation in co-curricular record program

COMMITMENT AS THE PROJECT TEAM:
• Collaborate efficiently and communicate clearly
• Seek constructive solutions to project challenges
• Ensure a safe work environment

COMMITMENT AS A STUDENT:
• Fulfill project deliverables as agreed, in a timely and professional manner
• Fill out the Student Registration Form and return to the Office of Sustainability
• Attend initial meeting with project team (staff, faculty, and Office of Sustainability Staff) to define project plan, receive background project information, agree upon scope and timelines, and expected deliverables
• Attend scheduled meetings, if needed, with project team who will review progress, provide support, expertise and advice
• Prepare all agreed upon outcomes and present final research/recommendations to project team
• Submit project report digitally to Office of Sustainability within two weeks of project completion

COMMITMENT AS A FACULTY MEMBER:
• Explain how the project fits into the course curriculum and how student(s) will be evaluated
• Attend initial meeting with project team (staff, student(s), and Office of Sustainability Staff) to define project plan, provide background project information, agree upon scope and timelines, and expected deliverables
• Provide support, expertise and advice to project team, as needed.
• Attend student presentation of research/recommendations
• Evaluate student report and presentation
PROGRAM BENEFITS

SUSTAINABILITY ON CAMPUS
Living Lab research will be used to further sustainability projects and considered during decision-making, helping to further ecological, social and economic sustainability of University operations. The Living Lab program offers the opportunity to effect change on campus, making the environment we work, live, and learn in more sustainable.

RESEARCH EXPERIENCE
Students are frequently looking for opportunities to develop their academic skills and build on their education through hands-on research experience. Providing applied research opportunities involves students in campus sustainability and connects them to the wider University community. The University of Manitoba thrives when its students are able to pursue their passions.

CONNECTING ON CAMPUS
The Living Lab program contributes to enhancing the connection between students, staff, and faculty members. By bridging the gap between research ideas and community members, the University is able to address challenges on campus and enliven the post-secondary experience.
FREQUENTLY ASKED QUESTIONS

The following FAQs should help to provide any additional information you might have regarding the Living Lab program. If you still have an inquiry or would like to discuss a project idea with an Office of Sustainability member, feel free to contact the office.

WHERE DO PROJECT IDEAS COME FROM?

Project ideas can come from any University of Manitoba community member who sees a sustainability challenge on campus. If you have a project idea, or if you’d like to work on an applied project on campus, talk to your Professor or Instructor, or contact the Office of Sustainability.

HOW DO I SUBMIT PROJECT IDEAS?

Faculty, staff, and students are encouraged to fill out a Project Description Form to begin the process towards formalizing a project. Once the form is submitted to the Office of Sustainability, an office staff member will process it and contact you in regards to moving forward with your idea.

WHAT ARE THE PROJECT SELECTION CRITERIA?

The Office of Sustainability requires that projects meet two distinct criteria before they can be formalized:

- The project must involve collaboration between a staff, a faculty, and a student member. Students can be undergraduate or graduate level; and
- The project must target a University of Manitoba campus sustainability challenge.

WHO CAN PARTICIPATE IN AN LIVING LAB PROJECT?

All University of Manitoba community members are able to participate in an Living Lab project. Depending on the scope, stakeholders from outside the University can also serve as a resource for the project.

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This flow chart represents the basic Living Lab work-flow. The goal of the program is create a hub of sustainability research on campus where results can be readily accessed by the community and visible to campus planners.
HOW IS A PROJECT FORMALIZED?
A project can only be formalized once it is reviewed by the Office of Sustainability and meets the selection criteria. If the criteria is not met, the Office can help to connect with the required U of M members or suggest changes to the project scope. Once the project is deemed to meet the criteria, it will be posted in the Living Lab Launch Pad.

DOES THE PROGRAM GRANT COURSE CREDITS?
Course credit can only be awarded by a participating faculty member. The Living Lab Launch Pad specifies whether a project is associated with course work or volunteer work. In addition, project reports may be suitable for academic publication. Contact the Office of Sustainability if you have questions involving the nature of a project.

HOW ARE LIVING LAB PROJECTS IMPLEMENTED?
Upon submission of the completed research, the Office of Sustainability will coordinate its implementation. Project conclusions will be given to appropriate University of Manitoba staff to determine when and how action can be taken. Any changes will be monitored and documented by the Office of Sustainability.

WHO GOVERNS THE PROJECT RESULTS?
After you have successfully submitted your project results, the Office of Sustainability is responsible for the distribution and availability of the information.
MATERIALS

Materials make up the building blocks of our infrastructure; the roads we drive on, the buildings we inhabit, and the products we use are all pieces of our world. In what ways can we develop these pieces to become more innovative and sustainable?

ENERGY

Society’s reliance on energy burns brighter each year. Innovations in the way we procure, use, and conserve energy lights our path for the future. The University is always striving to improve energy systems.

WATER

The University of Manitoba is the largest consumer of water in the City of Winnipeg. Reducing consumption of potable water and protecting surface water are priorities for the University community.

CLIMATE

The University of Manitoba is committed to leading the fight against climate change. In what ways can the campus further reduce its greenhouse gas emissions? Measurement and assessment procedures are also areas that can always be improved upon.

COMMUNITY DEVELOPMENT

In strategic planning, we often look towards community to collaborate and solve problems more effectively. The University community is a diverse group of educated and passionate people that can rapidly lead positive sustainable change. How can we harness this ‘public power’?

LAND USE & ECOLOGY

How can we better manage our land and lessen the impact we have on the surrounding environment? Land Use & Ecology is an area that represents our interaction with the environment on a small and large scale.

POLLUTION

The move to abandon materials and energy that expel harsh pollutants into our environment is in the forefront of public eye. How can the campus improve its air and water quality?

INDIGENIZATION

The University of Manitoba is committed to Indigenous Achievement, cultivating connections between Indigenous culture, knowledge, communities, and sustainable development.
TRANSPORTATION
On average, six out of every ten University of Manitoba commuters choose a sustainable form of transportation. Creating connections that encourage walking, cycling, carpooling, and public transportation reduces emissions and gives equitable campus access to all students.

POLICY
An effective way of promoting sustainable change in a community is by establishing progressive policies that allow positive ideas to thrive.

WASTE
Waste prevention/diversion programs are an essential focus for the Office of Sustainability and Physical Plant at the University. Targeting improvements to recycling and re-use on campus helps reduce resource consumption and waste footprint from campus operations.

EDUCATION
Currently 7% of the University of Manitoba’s courses are centered around sustainability. How can we bring sustainable knowledge to the forefront and develop an institution that encourages innovation and responsibility?

EQUITY & INCLUSION
The University believes in the inherent dignity of all people; differences should be respected and commonalities celebrated. In what way can we promote progressive equitable access? Social sustainability establishes support of all cultural and social demographics.

FINANCE
Projects that focus on financial systems through purchasing or economic development are a large part of the sustainability scope.

FOOD & AGRICULTURE
The University supports a safe, healthy, just, and sustainable food system. As a University with an agricultural history and a wide variety of food related course and degree programs, there is an established belief that food & agriculture intersect with sustainability.

HEALTH & WELLNESS
A vital aspect to a sustainable society is the physical and mental well-being of its citizens. How can the University work to connect and promote health, wellness, and sustainable living?
FORMS

PROJECT DESCRIPTION FORM
The Project Description Form is a template that helps to lay out the preliminary details of your project idea. If you are unable to complete the form, connect with the Office of Sustainability in person, by email, or by phone to fully define the research methods and prepare the project for action.

STUDENT RESEARCH AGREEMENT
If you find a project that interests you on the Living Lab Launch Pad, complete this form as the first step of your project. If additional help is required, the Office of Sustainability can provide you with more information and connect you with the appropriate staff and faculty members. The form will be finalized at an introductory project meeting.

STUDENT PROJECT EVALUATION FORM
Once a project is completed, the Office of Sustainability would love to hear about your research experience. Your input will help us to improve the program moving forward. Fill out the project evaluation form on your own or meet with us in person.

OFFICE OF SUSTAINABILITY CONTACT INFORMATION

501 Fitzgerald Building, 55 Chancellor’s Circle
umanitoba.ca/sustainability
(204) 474-6121
(204) 474-7517
sustainability@umanitoba.ca

The following forms can be filled out on your computer and emailed to the Office of Sustainability. You can also fax any completed forms or drop them off in person at the office on the Fort Garry campus. Use the contact information above to connect with us by your preferred method.