

KPU SCHOLARLY ACTIVITY 2015-2016

Each project is color coded into the 4 major applied research areas.



DESIGN THINKING



SUSTAINABILITY THINKING



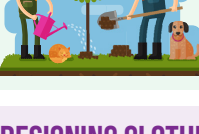
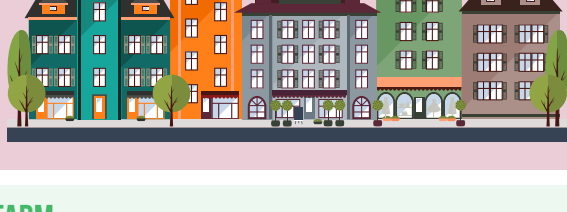
HEALTHY COMMUNITIES



CLEAN TECHNOLOGY

DEMENTIA FRIENDLY COMMUNITIES

A community collaboration between the City of Surrey and a team of KPU researchers are in the process of developing a Dementia Working Group comprised of people living with dementia. The goal is to put the voice of people living with dementia at the centre of identifying what would define a dementia friendly community.



THE SUSTAINABLE AGRICULTURE AND FOOD SYSTEMS LAB AND FARM

Once established, the lab and farm will contribute to innovative food production systems, products for growers, and will provide essential capacity to BC's vibrant organic seed industry.

DESIGNING CLOTHES FOR YOUNG GIRLS IN WHEELCHAIRS OR WITH FEEDING TUBES

A fashion and technology student is making a clothing line that contains welt openings or special types of pockets that are less restrictive when wearers are in a wheelchair, have a sensory processing disorder or are attached to tubes for feeding or supplying oxygen.



Supported by KPU's Wilson School of Design and Office of Research and Scholarship, and winner of the Surrey Board of Trade's 2016 Top 25 Under 25 Awards.



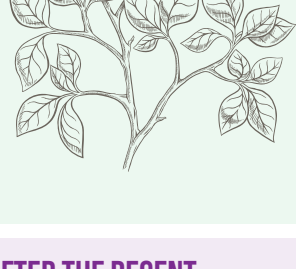
STUDYING PARASITES OF LIVESTOCK AND PROVIDING TOOLS TO OVERCOME CASES OF EVOLVED RESISTANCE

Faculty and student researchers are studying local parasite populations in horses to build a strong foundation for local equine facilities on how to better monitor, detect, prevent and treat equine nematode parasites.

Supported by KPU's Office of Research and Scholarship.

PRODUCING NATIVE BIOLOGICAL SOLUTIONS TO PLANT DISEASES AND PESTS

The Institute for Sustainable Horticulture and an industry partner are developing a new Trichoderma-based biofungicide to control soil-borne plant diseases in their nursery production operation.



The research will contribute not only to sustainability as we face increasing global food security challenges and a degrading environment, but create new markets and economic growth in the "green" economy.



20 SURGICAL DRILL COVERS WERE SHIPPED TO HOSPITALS AND DOCTORS IN NEPAL AFTER THE RECENT EARTHQUAKE IN 2015

A team of design students worked with Arbutus Medical and UBC to develop a drill cover that turns accessible hardware store drills into sterilized, effective, and affordable surgical tools.

DIVERTING WASTE TO A BIOFUEL FACILITY

A research team consisting of faculty and students from design, business entrepreneurship and environmental protection technology have created a prototype that diverts organic waste from the City of Surrey's landfill. They are currently working on a second prototype and will begin testing it in multi-unit residential buildings.



Supported by the City of Surrey, Foresight Cleantech Accelerator Centre and KPU's Office of Research and Scholarship.

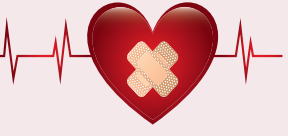
THE BEE LAB

The Bee Lab is conducting basic and applied studies in the area of cognition, ethology and behavioural informatics.

These studies are relevant to understanding the critical role bees play in pollination, sustainable agriculture, honey production, and ecosystem health.



Supported by KPU's Office of Research and Scholarship.



SIM THE EFFECTS OF DELIBERATE PRACTICE DEBRIEFING MODEL DURING A 'RESPONSE TO RESCUE' SIMULATION

Registered nurses are often the first professionals present when a patient's condition deteriorates. A KPU researcher, along with researchers across North America, are better preparing nurses to recognize and respond to life threatening complications. The study is comparing student nurses' competency and learning retention after exposure to learning simulations developed for Heart Failure Response.

FARM BUSINESS DEVELOPMENT AND MARKETING GUIDE

The Institute for Sustainable Food Systems is working in partnership with the BC Association of Farmers' Markets (BCAFM) to develop a resource guide that highlights successful market farmers and communicates their best business and operations management practices.



Supported by the Investment Agriculture Foundation of B.C.



THE OBSERVATIONS AND RESEARCH IN GENDER AND SEXUALITY MATTERS LAB

The lab is informing researchers, educators and the public interested in the influence of sexually explicit material on youth development by providing data regarding rates and types of sexual assault on university campuses in Canada, and the influence of disability status on reports of sexual assault. It is also further illuminating the influence of homophobic humour on perceptions of non-heterosexual orientations.

The lab presented the results of these five studies at the Western Psychological Association annual conference.

FACULTY RESEARCHER AND STUDENTS ARE DEVELOPING A BUSINESS SOLUTION WITH REAL WORLD APPLICATIONS

Computer science researchers are developing an electronic dispatch application that tracks all in-house deliveries for a local food and catering company.



The technology will make the company's operations sustainable for extremely large order numbers by allowing drivers to be dispatched without the need to report to the main office.

Supported by the Natural Sciences and Engineering Research Council of Canada.

FOSTERING REGIONAL FOOD SYSTEMS

The goal of this project is to empower the implementation of innovative approaches to community development in the area of food systems. The Institute for Sustainable Food Systems will engage in research and knowledge mobilization with community partners, including municipal government, private sector and non-governmental groups, to generate knowledge and build tools that enable communities in BC to develop and adopt a regional food system model.



Supported by the Social Sciences and Humanities Research Council of Canada.



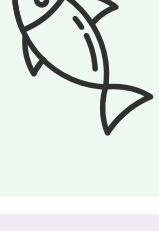
MINDFULNESS UGANDA

Researchers in the area of psychology are carrying out mind and body awareness workshops for teachers living in post-war Northern Uganda. The goal is to study the academic and psychological effects of implementing a mindfulness program in a primary and nursery school.

Recipient of the Mind and Life's 1440 Award and KPU's Chancellor's Chair Award.

BUILDING AN ACCESSIBLE FOOD SYSTEM POLICY DATABASE FOR BC COMMUNITIES

The Institute for Sustainable Food Systems is developing an open access and searchable policy bank for use by municipal planners, policy makers and community organizations working to advance local food systems. The policy bank will be a collection of up-to-date British Columbia municipal policy and zoning bylaws that directly and indirectly enable local food systems.



Supported by the Real Estate Foundation of B.C.



2 DESIGN STUDENTS SHOWCASE THEIR COOLING VESTS TO AN INTERNATIONAL AUDIENCE

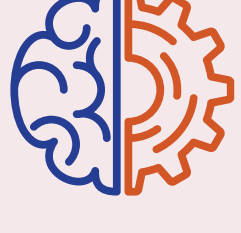
Two design students created a cooling vest for athletes with spinal cord injuries who cannot control their body temperature (thermoregulation), and as a result overheat while playing their sport.

Eight vests will be worn by Canada's elite wheelchair rugby players competing in the Paralympic Games in Rio de Janeiro in September 7-18, 2016.

Supported by KPU's Wilson School of Design and Office of Research and Scholarship.

LIFESPAN COGNITION LAB

The Lifespan Cognition Lab is wrapping up year one of a four-year longitudinal study of how thinking develops and changes from preschool to old age.



This work will inform theories of lifespan cognitive development, and could affect how we teach, parent, and interact with others.

Supported by the Canada Research Chair and KPU's Office of Research and Scholarship.



HOME ON THE RANGE: COST PRESSURES AND THE PRICE OF FARMLAND IN METRO VANCOUVER

The Institute for Sustainable Food Systems in partnership with the BC Food Systems Network worked on a small research project, commissioned by Vancity, to investigate reasons behind the high price of agricultural land in Metro Vancouver and how these prices impact the viability of farm businesses and the potential to expand our local food system.

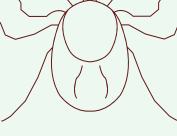
Supported by Vancity.



BRIDGING THE DIVIDES

A health science program researcher is working with Dietitians of Canada and the Canadian Mental Health Association (Ontario) to disseminate a national multi-stakeholder nutrition and mental health research agenda.

Supported by the Canadian Institutes of Health Research.



BIOPRODUCTS FROM INSECT WASTE MATERIAL

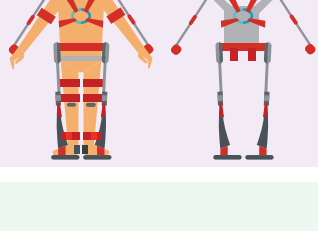
The Institute for Sustainable Horticulture and an industry partner are developing new biofertilizer products from insect waste material, and are further exploring the mechanism of plant pathogen suppression from their first collaborative project.

Along with training students, new grads and technical and teaching staff at KPU, the results of this project will benefit the industry partner by expanding its product line, reducing waste and increasing its environmental role. As well, the results will improve plant productivity and disease management for BC producers.

Supported by KPU's Office of Research and Scholarship.

HAPTIC NAVIGATIONAL HARNESS PROTOTYPE

A design student has built a wearable technology that allows individuals to navigate safely and hands free from one location to another through physical sensors built into a harness.



Supported by KPU's Office of Research and Scholarship.



REHABILITATED BIRD TRACKING PROJECT

A psychology researcher and Bee Cognition Lab primary investigator is leading a collaborative project between KPU and the Wildlife Rescue Association (WRA) in Burnaby, BC.

The project aims to monitor rehabilitated wildlife post-release with special attention to long-term survival rate. This feasibility study looks to match different tracking technologies (global positioning system, radar and cellular networks) with the behaviour and ecology of different bird species.

Supported by KPU's Office of Research and Scholarship.

INCLUDING ALL CITIZENS

The goal for this pilot project is to open up post-secondary opportunities for students with intellectual disabilities by designing a teaching tool that enables instructors to create fully inclusive learning environments.



Currently, the project is creating fully inclusive opportunities for five students with intellectual disabilities. Together with their peers, these five students will work towards earning their Faculty of Arts Certificate, the first of its kind in North America.

Supported by KPU's Office of Research and Scholarship.



THE SOUTHWEST BC BIOREGION FOOD SYSTEM DESIGN PROJECT

The Institute for Sustainable Food Systems is exploring the economic, environmental stewardship and food self-reliance potential of a bioregional food system in Southwest BC.

This 3 year project will produce information that can be used by municipal and regional governments, food system advocates, farmers, Indigenous communities, entrepreneurs and others interested in the future of SWBC's food system.

Supported by the Real Estate Foundation of British Columbia, R. Howard Webster Foundation, Vancity Community Foundation, Vancity enviroFundTM, Vancouver Foundation, and KPU.

NUTRIGENOMICS RESEARCH

Health science program researchers are exploring applications of nutrigenomics in health practice. The project's aims include developing a better understanding of how DNA-based dietary advice may foster improved health outcomes and creating tailored educational products that accompany nutrition-based gene test results.



Supported by the Natural Sciences and Engineering Research Council of Canada.



COMMUNITY GARDEN PROJECT

A psychology researcher and Bee Cognition Lab research associate is leading a partnership between KPU and the Honeybee Centre to create a community bee garden at the KPU Surrey campus.

The project will educate the KPU community and the broader public about the importance of honeybees, bumble bees, and wild bees.

Supported by KPU's Office of Research and Scholarship.

ONLINE ACCESS TO EDUCATIONAL RESOURCES

A journalism faculty member created a series of free online courses with a network of international journalists in cross disciplinary fields.



The goal is to make higher education resources about social media, digital and online culture openly accessible and available to a range of students from different socioeconomic means.



TR'ONDEK HWECH'IN TEACHING & WORKING FARM BUSINESS PLAN

The Institute for Sustainable Food Systems worked with the Tr'ondek Hwëch'in First Nation (TH), whose Traditional Territories are located near Dawson City, Yukon, to develop a 5-year farm business plan for their new teaching and working farm.

This farm is being developed by TH in collaboration with Yukon College and will provide fresh and affordable farm products, as well as agriculture education to encourage the learning of farm skills to TH citizens and community.

Supported by the Tr'ondek Hwëch'in First Nation.

Kwantlen Polytechnic University (KPU) is committed to actively supporting innovative research and scholarship that informs authentic, relevant, and integrative learning communities.

It is developing its cutting-edge curriculum and hands-on learning experiences to equip students with the practical knowledge, skills and abilities in four major areas of applied research:

Design Thinking, Sustainability Thinking, building Healthy Communities, and innovations in Clean Technology.

TO LEARN MORE, VISIT: KPU.CA/RESEARCH

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Research

