

November 2014

Undergraduate Research Initiative

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Introduction

As our university embarks on a second century of discovery, we are building on a dynamic research culture that enriches the academic experience for our students, creates new knowledge across a broad array of disciplines, and helps improve the economic, social, and cultural vitality of our region and beyond.

The goal of the Initiative is simple yet ambitious: to ensure every undergraduate student graduating from the University of Saskatchewan engages in meaningful experiences with research, scholarly or artistic productivity.

“We will not have succeeded, however, if we do not ensure that the vast majority of our undergraduate students have opportunities to experience research and discovery for themselves”.

Toward an Engaged University
2nd Integrated Plan, 2008-2012

Launched in 2012, the University of Saskatchewan’s Undergraduate Research Initiative is broadening engagement and awareness of undergraduate research by ensuring:

- 1) Meaningful curriculum-based research experiences;
- 2) Mentored student research experiences through faculty-supervised assistantships; and
- 3) Celebrating and showcasing undergraduate research experiences.

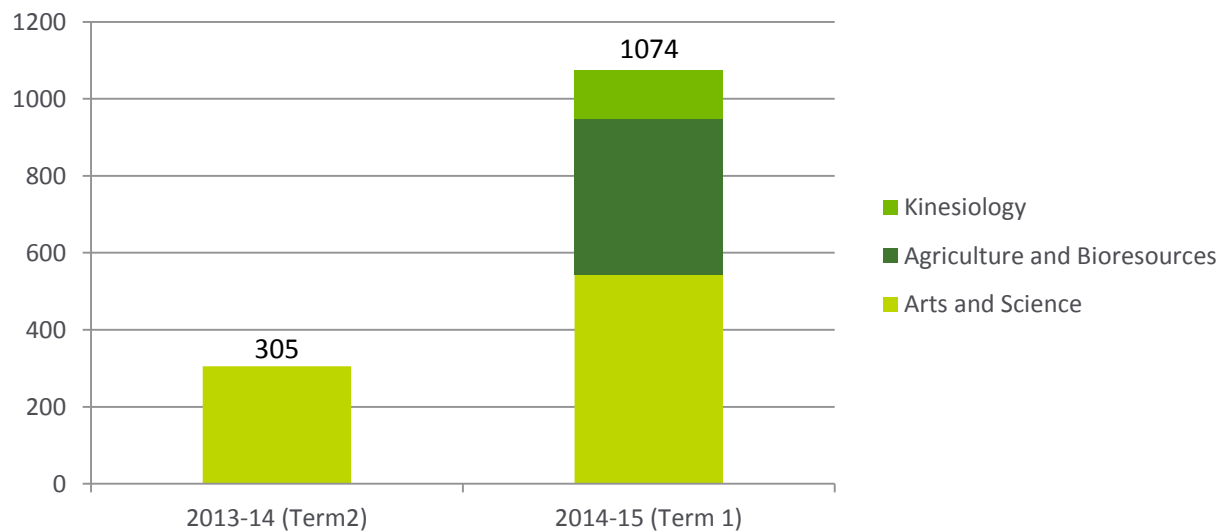
Curriculum-Based Experiences

Members of the undergraduate research initiative team are working with faculty to increase the number and distribution of curriculum-based research experiences. Initial reviews of U of S curriculum-based research experiences suggest that current opportunities are typically available during the senior year (300- and 400-level) and are often reserved for honours students. The undergraduate research initiative is focused on supporting faculty in developing meaningful research experiences in 100-level courses.

First-year classes which offer students meaningful research experiences cover the three stages of a model called the research arc and are expanding throughout our campus. Undergraduate students derive multiple benefits from being involved with in-class research experiences that move them through the steps of asking a question, attempting to answer the questions through investigation according to the tools and methodologies of a discipline, and sharing and disseminating the results of their research.

Following a successful pilot in two sections of a first year sociology course, the initiative has expanded to include courses in three colleges.

Student participation in first-year, curriculum-based undergraduate research experiences



CURRENT PARTICIPATING COLLEGES

In the 2014-2015 academic year, around 1700 students from the three inaugural participating colleges will experience curriculum-based undergraduate research. The colleges of Agriculture and Bioresources, Arts & Science, and Kinesiology are leading the initiative in first-year classes.

Agriculture and Bioresources Includes all first-year classes		
AGRC 111 (01A)	ANBI 110	EVSC 110 (01)
Sustainable Plant and Soil Management Professors Francis Walley & Krista Wilde 263 students	Introductory Animal Bioscience Professors Murray Drew, Ryan Brook & Natacha Hogan 97 students	Renewable Resources and Environment Professor Colin Laroque 43 students

Kinesiology Includes all new students majoring in kinesiology			
KIN 121 (02)			
Social Behavioural Foundations of Physical Activity Professor Leah Ferguson 126 students			
Arts & Science Includes specific first-year students in the ASAP, USLC Pathways, and Global Studies Certificate programs			
INTS 100 (91)	PSY 120 (03)	WGST 112 (07) & (03)	IS 110 (01)
Learning to Learn Strategies for Academic Success Professor Sandra Bonny 29 students	Biological and Cognitive Bases of Psychology Professor Ulrich Teucher 348 students	Introduction to Women's and Gender Studies Professor Marie Lovrod Professor Mirela David 28 students & 66 students	Global Issues Professor Joseph Garcea 73 students

Projected Term 2 Classes Includes 505 students from Arts & Science			
NRTH 101 (ASAP)	PSY 121	SOC 111	IS 201
Introduction to Circumpolar World Professor Alec Aitken ~25 students	Social Clinical Cultural and Developmental Bases of Psychology Professor Michael McGregor ~341 students	Foundations in Sociology Society Structure Process-2 sections Professor Victoria Mowat ~300 students	Global Cultures Citizens and Coexistence Professor Martin Gaal ~35 students

Notably, several specific student populations are participating in the in-class undergraduate research experiences.

In Agriculture and Bioresources, every first year student in the college will participate in an in-class research experience as all first-year classes are involved.

The College of Kinesiology has implemented an in-class undergraduate research experience for all first-year students intending to complete a kinesiology degree.

Arts & Science is offering undergraduate research experiences in classes involved in the Aboriginal Student Achievement Program (ASAP), the Global Studies Certificate, and the U-Bridge class with equal numbers of domestic and international students finalizing their English language studies.

NEW PARTICIPATING COLLEGES FOR 2015-2016

Additional colleges are looking towards embracing research in first-year classes in the 2015-2016 academic year. Discussions are currently underway with:

- Edwards School of Business
- College of Engineering
- College of Education

SUPPORTING CURRICULUM-BASED INNOVATION

Faculty implementing research into their courses have access to assistance from the **Curriculum Development Specialists** of the Gwenna Moss Centre for Teaching Effectiveness (GMCTE) which has ensured the courses balance multiple objectives, remain feasible in scope, and maximize the known student benefits.

The **Curriculum Innovation Fund**, administered through GMCTE, makes \$250,000 available annually to support innovative academic projects. This year's list of recipients includes the College of Agriculture and Bioresources who are putting the resources toward supporting the participation of student groups in the First-Year Poster Symposium taking place in December 2014.

In February 2014, interested faculty from the three initial participating colleges gathered to advance ideas and plans for curriculum-based undergraduate research experiences. These individuals are part of a **Community-of-Action** with an online PAWS group and in-person meeting/events each term.

To support faculty members embedding research experiences in large first year classes and/or those with specific populations, the Initiative provides financial support and organizes students to serve as **Research Coaches**. Recruited from experienced undergraduate and graduate students in a range of disciplines, students in this role are offered a 66 hour contract including training and participation in this year's Program Evaluation.

Assistantships

MATCHING GRANTS

In 2014, 75 Undergraduate Summer Research Assistantships were awarded to students working on faculty-engaged research. Funds were provided as \$2,000 or \$4,000 awards which were matched by the faculty supervisor or college.

Funds were allocated as follows based on undergraduate enrolment numbers:

- Agriculture and Bioresources \$24,000
- Arts and Science \$228,000
- Dentistry \$8,000
- Education \$40,000
- Edwards School of Business \$44,000
- Engineering \$44,000
- Johnson-Shoyama School of Public Policy \$8,000
- Kinesiology \$16,000
- Law \$8,000
- Medicine \$8,000
- Nursing \$32,000
- Pharmacy and Nutrition \$12,000
- School of Environment and Sustainability \$8,000
- School of Public Health \$8,000
- Veterinary Medicine \$8,000

Showcasing Student Research

SUMMER ASSISTANTSHIP SOCIAL

On August 14th an inaugural Social was hosted to allow students awarded a U of S Undergraduate Summer Research Assistantship (USRA) or an NSERC USRA and their mentors to gather to talk about their experiences and celebrate the work done.

Several students took advantage of a videographer available to capture and commemorate their summer experiences. A series of videos where students describe their research experiences and the benefits they derived from being assistants is available on YouTube by searching *U of S Undergraduate Researcher*. To see the compilation, visit: <http://www.youtube.com/watch?v=or-6R3d8kkg>.

UNIVERSITY OF SASKATCHEWAN UNDERGRADUATE RESEARCH JOURNAL (USURJ)

The Undergraduate Research Initiative provides support to the University of Saskatchewan Undergraduate Student Research Journal (USURJ). USURJ's introductory year was a success. The first edition of the on-line journal published ten works of peer-reviewed research and art by 15 undergraduate students. Notable highlights include:

- a monthly viewership of 2,000 in spring 2014;
- on-going opportunities for undergraduates to publish their work; and,
- developing the co-curricular skills of editors in academic publishing and editing.

The journal's second edition is anticipated for a winter 2015 release. Efforts are underway to ensure a broad range of disciplines are represented: targeted promotion to students in underrepresented disciplines and enhanced media coverage is intended to ensure comprehensive inclusion of a cross-section of fields of study. Yearly in-person launches of the journal are scheduled to draw attention to successful submissions and maintain awareness.

USSU PROJECT SYMPOSIUM

The University of Saskatchewan Student Union's Project Symposium started as a means of bridging gaps in the cycle of research on campus by offering an additional, pan-disciplinary opportunity for undergraduate students to publically showcase their research, scholarly and artistic works. In 2014, nearly 37 applications resulted in 20 actual displays from a wide array of disciplines. The Project Symposium is an adjudicated poster process that includes faculty and staff as judges of students' posters. Remarkable projects are awarded monetary prizes.

This event will take place again this coming January with increased efforts to reflect a greater range of disciplines and a streamlined judging process. Despite its success, renewed goals to increase the visibility, accessibility, and uptake among student participants and audience are underway while keeping existing features considered to contribute positively to success: location, flexibility in set-up and presentations, adjudication procedures, partnerships, and communications.

Raising Awareness

RESEARCH.USASK.CA/UNDERGRADUATE

In October the **Undergraduate Research website** was launched. It offers resources, service-descriptions and lists of opportunities for faculty, undergraduates and graduate students. Specifically, lists of participating classes, external funding opportunities, and stories about student research experiences are available.

In addition to the website, other ways of reaching and communicating with an audience of students, faculty, campus colleagues, and our national and international counterparts will increasingly involve social media. The Undergraduate Research Initiative's summer student created a Twitter account and tweeted to involve and communicate with interested students, faculty, and campus services and departments. It is our expectation that other social media tools will be utilized in the future, potentially including: Flickr, Instagram, and/or Facebook.

Future Endeavours

RECOGNITION: DEVELOPING A UGR CERTIFICATE

A working committee will be struck this year to develop a recommendation for an undergraduate research certificate. The recommendation will consider both the mechanisms and criteria for the award.

PEER TO PEER: UNDERGRADUATE RESEARCH WORKSHOP SERIES

A series of five, fifty-minute information workshops on undergraduate research are in the planning stages. Also in development are five drop-in sessions, facilitated by Peer Assisted Learning (PAL) and set to take place in the Collaborative Learning Lab in the University Learning Centre.

In Conclusion

The Undergraduate Research Initiative is making inroads to expand the number and quality of opportunities for students to ask research questions, participate in inquiry-based learning, and present their discoveries. At the same time, students, faculty and other members of the campus community can find out more about what research, scholarly and artistic works mean at this level and the importance of their contribution to our institution’s mission.

ACKNOWLEDGEMENTS

FACULTY PARTICIPANTS –Term 1

Dr. Sandra Bonny	Dr. Joseph Garcea	Dr. Fran Walley
Dr. Mirela David	Dr. Colin LaRoque	Krista Wilde
Dr. Murray Drew	Dr. Marie Lovrod	
Dr. Leah Fergusson	Dr. Ulrich Teucher	

RESEARCH COACHES –Term 1

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Jethro Cheng	Leanne Jaeb	Tanja Wildemann
Colleen Cochran	Kim Kargut	Linzi Williamson
Ashleigh Cummer	Lisa Langan	

THE UNDERGRADUATE RESEARCH INITIATIVE TEAM

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