

UNDERGRADUATE RESEARCH INITIATIVE 2018 ANNUAL REPORT

PREPARED BY

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research.usask.ca/undergraduate

URI IMPACT BY THE NUMBERS

7860 Enrollments in FYRE

99 Research Coaches

49 FYRE Instructors

873 Social Media Followers

84 USURJ Publications

154 USURJ Editors and Authors

25664 USURJ Downloads

Faculty Excellence Awards **11**

Student Research Assistantships **421**

Symposia Posters **364**

Percent of Student Engagement **50**

Undergraduate Research Workshops **40**

Student Stories **22**



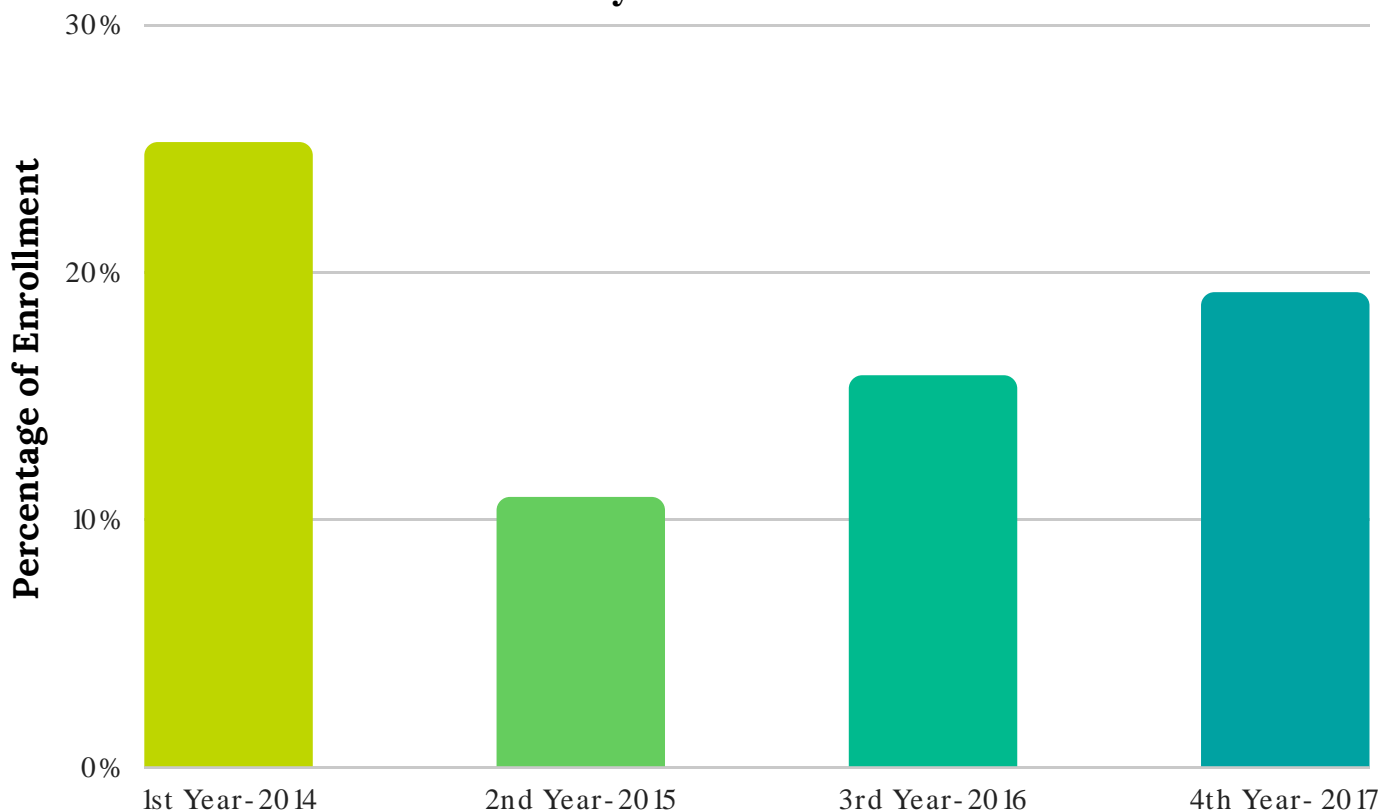
"Today, you have contributed to an intellectual community, joining powerful stakeholders of knowledge and forces of change. Today, you have laid down the foundation for future innovations, discoveries, and truth."

- Jessica Klaassen-Wright (Students' Newspaper Editor-in-Chief) addressing undergraduate researchers at the USRA Symposium

UNDERGRADUATE RESEARCH ENGAGEMENT

We followed a cohort of 3035 undergraduates starting in their first year from 2014-2018. By focusing on FYRE, the Undergraduate Research Initiative has achieved **50 % participation** in course-based research experiences.

Student Enrollment in Course-Based Research per Year of Study: The 2014-2018 Cohort



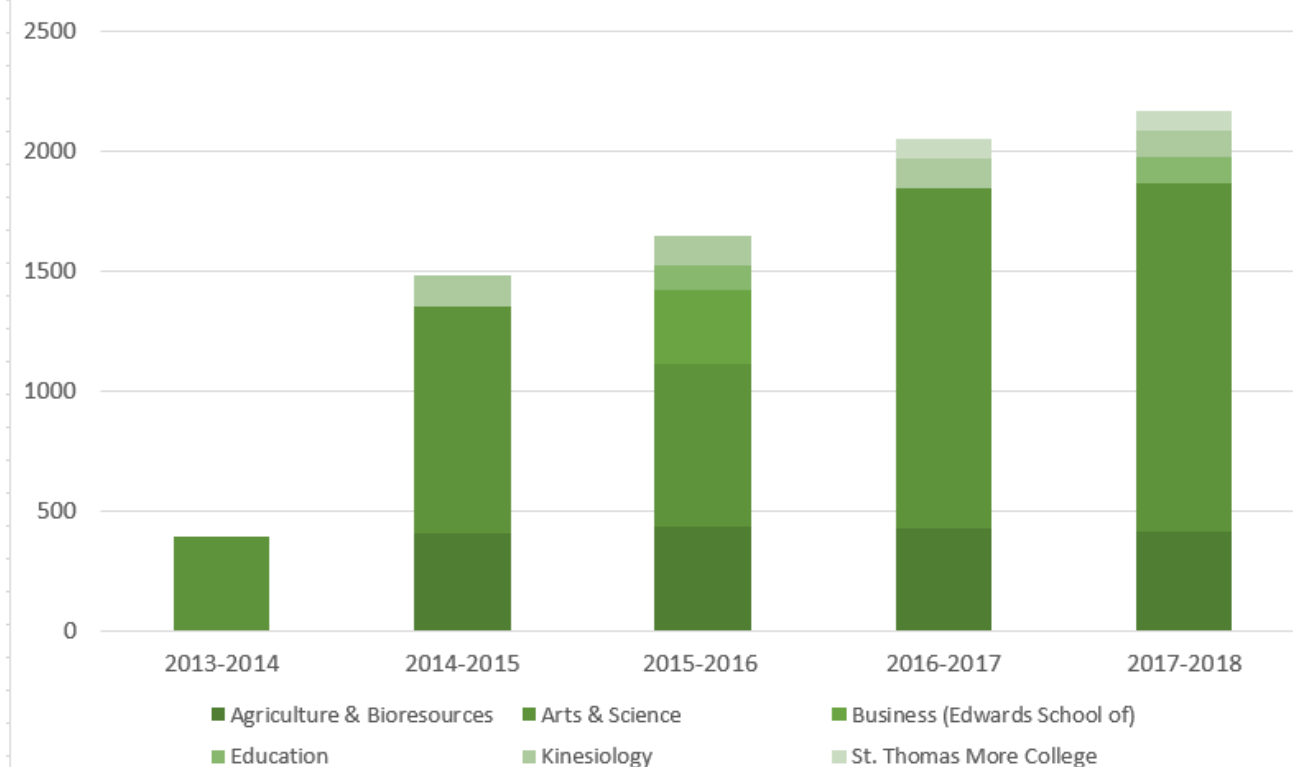
50 % of Students

have engaged in a course-based
undergraduate research experience by the
end of their undergraduate programs

First-Year Research Experiences **FYRE**

FYRE classes have taken off with significant growth in student participation over the last five years.

FYRE Enrollment From 2013-2018 by College



Course	Number of Students Enrolled
Agriculture 111	1063
Animal Bioscience 110	422
Astronomy 104	418
Astronomy 113	123
Classical and Medieval Renaissance Studies 110	245
Curriculum Studies 164	75
Commerce 104	402
English 110.6	670
Environmental Sciences 110	187
Geography 120.3	800
Geography 130	518
Geology 109*	60
History 135	225
History 155	64
History 165	110
History 175	14
Indigenous Studies 107	33
Interdisciplinary Studies 102.3*	119
International Studies 110	103
Kinesiology 122	483
Northern Studies 101	12
Political Sciences 111	33
Psychology 120	348
Psychology 121	175
Sociology 111	303
Sociology 112	767
Women and Gender Studies 112*	490
Total:	8262

FYRE Classes

Students can opt into a wide variety of FYRE classes ranging across colleges and departments. Each one offers an authentic research experience.

**SINCE SEPTEMBER 2014
THERE HAVE BEEN**

8262

FYRE ENROLLMENTS

* Asterisks denote ASAP classes

FYRE

FYRE Survey Results for 2017-2018

Survey results from the most recent academic year indicate student research gains from FYRE experiences. Mean scores demonstrate that students agreed that they contributed to a research question, disseminated their results, and had an increased understanding of the subject due to the research experience.



Kara Loy (Coordinator for the URI) congratulating FYRE Award Winner

Results of a five-point agreement scale highlight that FYRE students agreed that:

FYRE
Cumulative

FYRE
ASAP

4.16

4.19

They **contributed** to a **research question**.

3.87

4.19

They **disseminated their results** with someone other than their instructor.

3.68

4.19

Their **academic skills** (i.e., finding and reading journal articles, summarizing research findings) **improved** as a result of the research experience.

3.65

4.00

Participating in research would **contribute** to their **academic success**.

FYRE ON THE BEAMLINES



Professor Colin Laroque offers students in Environmental Science 110 an exciting opportunity: to complete a research project using the IDEAS Beamline at the Canadian Light Source (CLS). Previous students involved in this project published their results in a peer-reviewed journal.

"You aren't doing the regular work, you are actually making an impact on scientific research."



HISTORY COLLABORATORIUM



The History Collaboratorium is designed to facilitate research partnerships between the University of Saskatchewan and community partners in ways that communities themselves identify as meaningful and beneficial.

"[with] course work, you don't always see the relevancy of it, whereas this, you can see the direct impact that you might have with it, or where it can be applied within the real world"

Undergraduate Summer Research Assistantships

USRA'S

USRA Application Rubric

Score Levels	Research Level	Research Component	Organization and clarity of application
4	<ul style="list-style-type: none"> Is well thought-out and supports undergraduate research Presents opportunities for student to think critically Has a clear goal related to the field of study Prepares student for research in the discipline 	<ul style="list-style-type: none"> Research component is well thought-out and explained Significant use of research methodologies, applications and/or tools Includes mechanisms to keep student in adequate communication with supervising professor 	<ul style="list-style-type: none"> Information is clearly focused in an organized and thoughtful manner Information is constructed in a logical pattern to support student research
3	<ul style="list-style-type: none"> Is well thought-out and supports undergraduate research Presents one, or more, opportunity for student to think critically Has a clear goal related to the field of study Prepares student for research in some aspect of the discipline 	<ul style="list-style-type: none"> Research component is thorough and transparent Presents some means for the student research experience to include application of methodologies, applications and/or tools Includes some means of communication between student and supervisor 	<ul style="list-style-type: none"> Project clearly indicates a research component for undergraduate student The information provided adequately indicates roles of student and supervisor
2	<ul style="list-style-type: none"> Supports undergraduate research in some ways Includes some opportunity for critical thinking Project goal may be unclear Exposes student to few materials and resources Minimally prepares student for research in the discipline 	<ul style="list-style-type: none"> Minimally explains research component Low-level use of research experience including few methodologies, tools and/or applications Minimal communication between student and supervising professor 	<ul style="list-style-type: none"> Project has a research focus but does not necessarily identify a relevant role for student Information loosely supports the student research experience
1	<ul style="list-style-type: none"> Provides an inconsistent research experience Does not provide an opportunity for critical thinking Lacks a clear goal Exposes student to limited material and resources Does not prepare student for research in the discipline 	<ul style="list-style-type: none"> Does not explain research component Minimal or insufficient research experience provided Does not sufficiently account for communication between student and supervising professor 	<ul style="list-style-type: none"> Project description is unfocused and unclear Information does not support undergraduate research experience Roles are inadequately explained

USRA applications that provide for meaningful experiences tailored to the students' education level are welcome. Awards are available to support students at any undergraduate level. Applicants may want to consider and comment on the role a student may take in the following aspects of research:

- setting criteria and contexts
- selecting questions and methodology
- establishing processes
- analyzing data and contextualizing/explaining
- interpreting and synthesizing data
- disseminating/showcasing findings

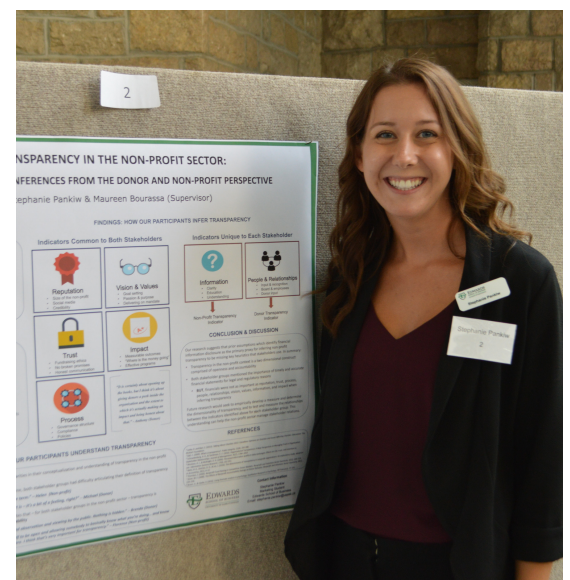
USRA Experiences First Hand

The following are quotes taken from feedback provided by 2017 USRAs regarding the USRA Symposium:

'I appreciated the feedback and confirmation of the importance of the research I have had the pleasure of being a part of.'

'I never thought that showcasing my work throughout the summer would be so much fun and rewarding. Networking with a variety of faculty, students and other university members, truly enriched my undergraduate research experience.'

'I was able to connect with students from other disciplines and it was very rewarding.'



Stephanie Pankiw (USRA 2017 Award Winner and PAL Peer Mentor)