Undergraduate Research Support Program

2014 Annual Report

Prepared by the

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Overview

Undergraduate research, scholarly, and creative activities (URSCA) have been going on at UIS for over thirty years, but the campus culture has yet to embrace URSCA as part of our core educational mission. With a part-time Director and part-time Administrative Clerk, and faculty and staff from across the campus, the Undergraduate Research Support Program promotes access to undergraduate research for all of our students. We are responsible for the Undergraduate Student Research (USR) grant program and the Student Arts and Research Symposium (StARS). In addition to these ongoing programs, we started two new programs and brought a consultant to campus from the Council on Undergraduate Research. We took a contingent of UIS students to the National Conference on Undergraduate Research, and we initiated the first annual University of Illinois Undergraduate Research Day at the state capitol. In just two years we have accomplished some of our medium and long term goals for the program.
Vision statement

Be a community in which all UIS students and faculty critically engage the world through research, scholarly, and creative activities.

Mission statement

The URSP provides leadership to empower undergraduate research, scholarly, and creative activities through faculty and student collaborations.

Goals

Short Term
Website
faculty development workshop
Faculty and student survey
Freshman Seminar-classroom visits by peers
Definition of UR to Campus Senate
Expand StARS—include all colleges, online students (StARS planning committee)

Medium Term
Faculty mentor award
Personnel policy changes
Faculty and student exchange program (COPLAC)
Integrate UR into curriculum (CUR workshop)

Long Term
External funding (NSF REU at Therkildsen Field Station, other)
Posters Under the Dome (the State Capitol)
Increase off-campus student presentations (NCUR)
Publish UR (online journal, IDEALS)
Executive Summary

Accomplishments for FY 2014

- Held the first annual University of Illinois Undergraduate Research Day at the state Capitol
  10 students from each UI campus presented posters to legislators and the general public
- Held third annual campus-wide Student Arts & Research Symposium in April
  Almost 100 students presented, representing every College, graduate and undergraduate, online, and CAP Honors students.
  All five deans contributed to the budget
  Two keynote speakers (science and humanities)
  About 50 attended the Thursday evening events
  About 150 attended afternoon keynote, another 100 in the evening
- Continued campus-wide dialogue about what undergraduate research means.
  URSC members met with all department chairs and deans.
  Wrote and administered departmental questionnaire (Appendix).
- Held faculty development meetings to discuss undergraduate research program.
  Hosted CUR consultant
    Dr. Shanahan met with small groups from select department and we webcast her workshop
    Held Faculty Development Workshop on grant writing
- Engage students in undergraduate research as experiential learning, a key component of general education at UIS.
  The Research Society co-sponsored webinars and workshops on careers and graduate schools
  Undergraduate Student Research grant program made 8 awards.
  We sent 7 students to the National Undergraduate Research Conference
- Be able to reward faculty for the work they do mentoring and integrating undergraduate research into their curriculum.
  Began discussion with Campus Senate about recognition and reward for faculty mentors.
  Brought CUR consultant to campus to meet with faculty leaders and administrators.

Plans for FY 2015

This summer we will continue our projects with COPLAC: the Teagle grant and LEAP initiative. Keenan Dungey will attend the annual COPLAC meeting. We will also develop a proposal for a summer undergraduate research program at the Therkildsen Field Station at Emiquon.

This Fall we will propose a faculty mentor program to provide one-on-one training for faculty interested in mentoring undergraduate research students. We also would like to hire a student worker to assist with our programs, in particular to be a peer mentor for students. And we will explore international undergraduate research opportunities.

This Spring we will once again host the Student Arts and Research Symposium (Apr 9-10, 2015), with plans to continue to involve more online students. We will also send a group of students to the National Conference on Undergraduate Research (Apr 16-18, 2015) and once again sponsor an event at the capitol.

The Research Society at UIS will continue to be involved in supporting undergraduate and graduate research across campus, with plans to participate in the Involvement Expo and Homecoming.
Introduction

The Undergraduate Research Support Program (URSP) defines its mission as to empower students and faculty at UIS to engage in undergraduate research, scholarly, and creative activities (URSCA). We believe that all students can benefit from URSCA, which meet the ECCE Engagement criteria of UIS’ upper division general education program. To accomplish our mission, in our first year we decided on a set of goals, listed on page 2 of this document. In this, our second year, we accomplished many of those goals, but challenges remain. Below is a description of our activities.

Website

We continued to improve the website (http://www.uis.edu/undergraduateresearch/) and Facebook page (https://www.facebook.com/UISstudentresearch). We added a student feature section. The Facebook page is underutilized, though. We need to develop a media strategy to increase traffic.

Faculty and Student Workshops

The Research Society at UIS, a student club, sponsored webinars on preparing for graduate school, and co-sponsored a workshop on Forensic Science on May 8 with Career Services.

On Feb 28, we co-sponsored a workshop with the Faculty Development Office on “Strategies for Securing External Funding.” Dr. Stephen Johnson (CHE) and Dr. Kamau Kemayo (AAS) presented what they’d learned from last year’s CUR Dialogues in Washington DC. While the attendance was low, their presentation material will be made available on our website.

Faculty and Student Survey

Last year we surveyed the faculty on their attitudes towards URSCA. This year we sent a questionnaire to each undergraduate department in order to determine what research elements may already be in their curriculum. See Appendix A for the questionnaire text. Of the 25 undergraduate programs on campus, we received reports back from 9. While the results are still being compiled, we learned the complexities in defining URSCA for various disciplines. And we increased the dialogue on campus around issues in URSCA.
Table 1. Preliminary Results from UIS Departmental 2014 URSCA Questionnaire.

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Classroom visits

Last year 5 members of The Research Society visited the Freshman Seminar courses to talk about undergraduate research. This year The Research Society sponsored a poster session at Homecoming. Next year we might sponsor a breakfast event at Homecoming that will feature undergraduates speaking with their peers about research. We also plan to return to classroom visits, perhaps with a student worker position.

Definition of Undergraduate Research

We are currently using the statement below to define URSCA for our campus. We adapted it from the statement by the Council on Undergraduate Research, a national organization of which UIS is an institutional member. We plan to submit this definition to the Campus Senate along with proposed changes to the Personnel Policies (see below).

“Undergraduate research, scholarly and creative activities (URSCA) are recognized nationwide as high impact experiential learning activities critical for developing leadership. At UIS, undergraduate research is broadly defined to include all scholarly and creative activities undertaken by an undergraduate student in collaboration with a faculty mentor that include: 1) use of disciplinary or interdisciplinary methodology, 2) identification of an original investigative goal in an area of discovery, integration, application, or teaching, 3) carrying out an independent or small group project outside of class, and 4) dissemination of the results to peers.”

Expand StARS

This April we sponsored the third annual Student Arts and Research Symposium (StARS). Over 100 students presented their research, scholarly and creative activities at a two day campus-wide event. Additionally, we had two keynote speakers: Dr. Peter Kareiva from The Nature Conservancy and Dorothy Allison, national book award winning author. Additional sponsorship was provided by all four Colleges and Brookens, as well as COLRS and the ECCE Speaker Series.
The breadth and depth of the student presentations was greater than in previous years (see Appendix B for the general program). Students from all of the Colleges, both undergraduate and graduate, presented, including online and on-ground students (see Figure 1). This professional event was coordinated by a team of faculty and staff: Layne Morsch, Carrie Switzer, Sheryl Reminger, Meagan Cass, Abigail Walsh, and Melissa Gribbons. All of the events were available online and have been archived on our website. The planning committee will present their strategies for including online students in a campus research symposium at the Sloan-C national conference this October. Their goal is to continue to increase participation by online students next year. Along those lines they are requesting a name change for the program to the “Student Technology, Arts, and Research Symposium” (still STARS).

![Figure 1. Student Presenters at StARS 2014 by Department.](image)

**Faculty Mentor Award**

The faculty who mentor URSCA should be recognized and rewarded for their efforts. The mentoring of a student in an original work goes above and beyond the classroom education of our students. While there has been some interest in developing an award program, right now we are pursuing two related goals with will impact more faculty: changing the personnel policy (see below) and creating a program to mentor faculty who are interested in becoming URSCA mentors. Through our departmental questionnaire, we obtained the names of faculty across campus who are already involved in URSCA. They could serve as mentors for faculty who are not yet involved. We will request funds for FY15 to sponsor a competitive mentoring program to train four-six additional faculty in how to work with undergraduates on an original research project.
Personnel Policy Changes

Last year we were approached by the chair of one of the College Personnel Committees for advice on how to evaluate a faculty member’s portfolio that included URSCA. We drafted a non-binding guideline. This year we met with the campus Personnel Policy Committee to discuss how to implement changes that will recognize and reward faculty work in this area. Currently the College of Liberal Arts and Sciences has an NIA program for faculty who mentor 15 students in credit-bearing URSCA. Such a program needs to be implemented throughout campus, and at a more equitable rate. There also need to be official guidelines for personnel committees to evaluate faculty performance in this area.

Faculty and Student Exchange Program

Last year we met with Dr. Jonathan GoldbergBelle to discuss how students can participate in the exchange program of the Council of Public Liberal Arts Colleges (COPLAC) of which UIS is a member. One UIS student did participate in the distance mentoring undergraduate research program, funded by Teagle. This year we met to discuss how students can combine Study Abroad with an URSCA. This coming Fall Dungey may be travelling with GoldbergBelle and Klingshirn to three English speaking European universities that have strong undergraduate research programs in order to further develop these ideas.

Integrate URSCA Into the Curriculum

Ideally, every UIS student would have the option to gain an URSCA experience through a course in their major. Right now only two programs require undergraduate research (CAP and CHE), though more are considering this high-impact learning activity (see Table 1 above). In order to promote dialogue on this topic at our campus, we obtained a Strategic Academic Initiatives Grant to fund a consultant. Dr. Jenny Shanahan is the director of Undergraduate Research at Bridgewater State University and a leader in the Council on Undergraduate Research. She came to campus for two days in October and met with campus leaders (faculty and administrators). Additionally, she met individually with 5 departments to evaluate their curricula and offer suggestions for including URSCA. And she held a campus workshop, which was well attended (over 20 faculty and staff) and webcast. Comments on a post-workshop survey (13 responses) were positive and expressed interest in learning more about undergraduate research support programs.

External Funding

In collaboration with COPLAC, UIS currently has limited external funding to support URSCA. Growing opportunities for our students will require funds in addition to institutional support. We are in the process of proposing a summer undergraduate research program at The Therkildsen Field Station at Emiquon to granting agencies (eg. NSF) and the Development Office. Two members of the URSC (Dungey and Swan) are also on the Emiquon Advisory Board, and so there are synergies and institutional ties that can be leveraged. Additionally, Dungey and Loui have experience with the NSF Research Experiences for Undergraduates grant program.
Undergraduate Research Support Program

Posters Under the Dome

Last year Dungey approached the undergraduate research directors at the other two UI campuses to propose the idea of a joint event at the state capitol. The Council on Undergraduate Research has sponsored a “Posters on the Hill” program in Washington DC for many years, and 14 states have a similar program at their capitols. Through a series of conference calls, a capitol tour by Ed Wojcicki and many e-mails, we held the event on May 1. The University of Illinois Undergraduate Research Day (House Bill 1016) consisted of ten students presenting from each of the three campuses (see Figure 2). UIS acted as host, with our PR and Conference Services staff on hand. In addition to a poster session, at which many legislators stopped by to speak with their constituent, the students got a personal tour of the capitol by a UI alum. While there were some difficulties (getting the word out to capitol staff, negotiating the elevators with the poster supports), everyone agreed to hold the event again next year.

Figure 2. University of Illinois Undergraduate Research Day participants and the state capitol.
Increase Off-Campus Student Presentations

Prior to our questionnaire this year, there was no central collection of off-campus student presentation information. So we can’t tell, yet, if our programs are increasing the number of off-campus presentations. However, we initiated a new program this year which will directly increase the number of students presenting at a national conference. We solicited applications from students to receive a travel award to the National Conference on Undergraduate Research in Lexington, KY Apr 2-5. The student conference registration fees were covered by Student Life. Seven students were selected by our committee, and all of them were accepted by the NCUR committee. At the last minute, one student couldn’t attend the conference. So six undergraduates, one graduate student, and one faculty member participated in NCUR this year (Figure 3). For half of the students this was their first conference presentation. Some of the students were veterans of national conferences in their discipline. All of the students thought that the conference was a great experience and asked if they could go next year. NCUR 2015 on Apr 16-18 will be at Eastern Washington, and so funding and logistics will be more complicated. To help justify the expense, UIS could send a representative of a graduate program to participate in the Graduate Fair at the conference.

Figure 3.

Students and faculty participated in NCUR 2014 at Lexington, KY.
Publish Undergraduate Research

As can be seen in Table 1 above, while around 100 undergraduates are presenting their research, only one resulted in a peer reviewed publication this year. To increase the number of students getting published, Dr. Tena Helton (chair of ENG) organized a campus-wide discussion last year on the topic of a UIS undergraduate research journal. Unfortunately, there was faculty resistance to this idea. However, the Capital Scholars Honors program went ahead and produced their own undergraduate research journal called Continuum (http://michaelromanelli.wix.com/continuum). Additionally, all StARS participants were invited to publish their work in the COPLAC online undergraduate journal, Metamorphosis (http://www.coplac.org/publications/metamorphosis/), or the University of Illinois digital archives, IDEALS (https://ideals.illinois.edu/). Another idea to increase student publications would be to require NCUR participants to submit a manuscript.
Appendix A

Department Questionnaire:
Undergraduate Research, Scholarly and Creative Activities
In the Curriculum

Introduction

Undergraduate research, scholarly and creative activities (URSCA) are recognized nationwide as high impact experiential learning activities critical for developing leadership. At UIS, undergraduate research is broadly defined to include all scholarly and creative activities undertaken by an undergraduate student in collaboration with a faculty mentor that include: 1) use of disciplinary or interdisciplinary methodology, 2) identification of an original investigative goal in an area of discovery, integration, application, or teaching, 3) carrying out an independent or small group project outside of class, and 4) dissemination of the results to peers.

Incorporating undergraduate research into the curriculum at UIS is one way to increase participation in URSCA and, in turn, student learning, given the gains from URSCA observed in research (http://web.grinnell.edu/sureiii/Science_in_Solution_Lopatto.pdf). To understand where UIS currently stands in terms of URSCA, we are in the process of creating an inventory of URSCA curricula in the departments.

Please complete the following informational survey about your department’s activities over the past year. Return to ursp@uis.edu by Monday, April 28.

1. Program Name:
2. Program Contact Person:
3. For your discipline, what types of scholarly activities could undergraduate students participate in (check all that apply):
   a. creative works
   b. creative performance
   c. design studies
   d. community-based research
   e. education research
   f. project internship or practicums
   g. develop case study
   h. senior thesis
   i. group or individual projects
   j. original data collection:
       i. quantitative
       ii. qualitative
       iii. mixed methods
       iv. laboratory
       v. field
   k. other: please describe
4. Current courses in your catalog that include a research component:

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<td>Introduce academic arguments</td>
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<tr>
<td>Employ primary and secondary sources</td>
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<td>Analyze texts and/or data</td>
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<td>Find scholarly sources</td>
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<td>Critically evaluate sources</td>
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<td>Write with professional style</td>
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<td>Present with professional style</td>
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<td>Consider ethics of scholarly practice</td>
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<td>Complete IRB/Animal Care etc. proposals</td>
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<tr>
<td>Write project proposals</td>
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<td>Create new knowledge</td>
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5. In your department in the past year, please estimate how many:
   a. Students were involved in URSCA
   b. Faculty mentored URSCA
   c. Students presented at
      i. UIS
      ii. Regional conferences
      iii. National conferences
   d. Student publications appeared in
      i. Undergraduate journals
      ii. Peer-reviewed journals

6. Please submit names of faculty and students who have collaborated on URSCA in your department over the past year.

7. Would your department be interested in sharing a Research Ethics course with a similar department (eg. social sciences)? Or would a student workshop on the responsible conduct of research (possibly combined with CITIprogram.org training) suffice for the needs of your department, offered once a semester?

8. Please attach syllabi and/or sample assignments which demonstrate your program’s integration of URSCA.

Thank you for completing our department questionnaire by April 28. Results will be made available upon request after May 17.

Keenan Dungey, Ph.D.
Director, Undergraduate Research Support Program
217-206-7345
ursp@uis.edu
Appendix B

Student Arts and Research Symposium

Prepared by the

Student Arts and Research Symposium Planning Committee

Layne Morsch, co-chair
Carrie Switzer, co-chair
    Meagan Cass
    Michele Gribbins
    Sheryl Reminger
    Abby Walsh
Brian Moore, Administrative Clerk
2014 Schedule

Thursday Evening, April 10th

5:00 p.m.  UIS Music Performances – Brookens Auditorium
6:30 p.m.  Reception – Outside of Brookens Auditorium
7:00 p.m.  Launch of the Alchemist Review – Brookens Auditorium

Friday, April 11th

8:00 a.m.  Check In/Registration – Sangamon Auditorium Lobby (PAC)
9:00-10:00 a.m.  Oral Presentation Session #1 – Public Affairs Center (PAC)
10:15-11:00 a.m.  Oral Presentation Session #2 – Public Affairs Center (PAC)
10:15-11:45 a.m.  Student Directed Play Reading of Keegan Otwell’s The Story – PAC H
11:00-11:45 a.m.  Music Performances – Sangamon Auditorium Lobby (PAC)
11:30 a.m. – Poster Session & Art Exhibition – Sangamon Auditorium Lobby (PAC)
12:30 p.m.
12:30-1:30 p.m.  Lunch for Symposium Participants and Faculty Mentors – PAC C/D
1:30-2:30 p.m.  Keynote Speaker – Dr. Peter Kareiva, Chief Scientist and a Vice President for The Nature Conservancy – Brookens Auditorium
2:30-3:00 p.m.  Ice Cream Social – Outside Brookens Auditorium

8:00 p.m.  Dorothy Allison Reception & Book Signing – Outside Brookens Auditorium

For more information go to: http://go.uis.edu/StARS