



University of Alaska Fairbanks

Undergraduate Research and Scholarly Activity (URSA)

Annual Report AY 2015-16

URSA (Undergraduate Research and Scholarly Activity) (URSA), which was established in 2011, is to support, develop, and institutionalize UAF's diverse and robust undergraduate research and scholarly activity programs. This activity refers to student- and faculty-led research and creative projects that are designed to enhance the learning experience of UAF students and faculty. URSA is a key component of UAF's commitment to excellence in undergraduate education and research.

1. Provide funding for undergraduate students and faculty who collaborate on research and creative projects;
2. Serve as a clearinghouse for projects that offer undergraduate students and faculty opportunities to collaborate in research or creative projects;
3. Assist UAF faculty and staff who strive to create or maintain undergraduate research and creative scholarly programs;
4. Create regular events that serve as venues for students to present their research and creative projects;
5. Catalog and archive UAF undergraduate student participation in research and creative projects, as well as the outcomes and products of those projects; and
6. Facilitate undergraduate student recruitment and retention initiatives through program-specific initiatives.

Through the aforementioned programs and initiatives, URSA aims to improve skills in critical thinking, creative problem solving, and communication and to engender a culture of life-long learning among all UAF students. URSA is UAF's resource for the development and promotion of experiential learning activities that engage undergraduate students in support of UAF's goal to become a leading student-oriented research university. In this age of ever-increasing information and access to that information, research literacy is a required competence for the entire populace, not just UAF students. Thus, offering opportunities for undergraduate students to participate in research and creative scholarship is a noted best practice in higher education. Building on existing efforts and capacities, URSA attracts, retains, and enables UAF students to pursue varying levels of research and scholarly activity including scholarly exhibits, performances, or research endeavors.

1. URSA Administration

- a. Trent Sutton, UAF Fisheries Department, became 18% URSA Director effective 01 July 2016, following the departure of Barbara Taylor, URSA Codirector in June 2016.
- b. Kate Pendleton continues to serve as the title URSA Coordinator,
- c. The URSA Advisory Board was expanded to include the following UAF faculty: Wendy

3. Clearinghouse for Undergraduate Student Opportunities
 - a. URSA continues to serve as UAF's clearinghouse for undergraduate student opportunities to engage in unique projects conducting research or creative scholarly activities. However, the process is informal (reliant on passive communication) and thus quantifying URSA's role as clearinghouse or student/faculty matchmaker is difficult because URSA is not a student program; rather, URSA is an embodiment of UAF's institutional support for undergraduate student and faculty collaboration in research and creative projects.
 - b. Sixty-three UAF students enrolled in FYE (First-Year Experience) URSA, and MRAP (Museum Research Apprenticeship Program) courses during AY2015-16 (see 5. Curriculum Development below).
 - c. Fifty-three UAF students received URSA funding in support of research or creative scholarship during the fall, spring, and summer of AY2015 and another 9 students applied but did not receive funding. Some of these students may have been matched with their project either directly by URSA or indirectly through URSA's request for proposals. In addition, walk-in students seeking advice with respect to identifying research opportunities and/or mentors are frequent in the URSA office (weekly at a minimum and multiple weeks at the beginning of a semester and around an URSA application deadline date). URSA has not tracked or followed up with these ad hoc advisees because they do not all apply for funding and, as a result, are not entered into the database.
4. Student Tracking and Project Cataloging
 - a. The URSA database currently has 1,601 UAF undergraduates that have been involved in research since the URSA database was created in 2012.
 - b. The 2013-2014 UAF accreditation report stated that 41% of UAF undergraduate students have participated in an academic research experience over the course of their baccalaureate studies. Further, the 1,601 students in the URSA database support that quantification of undergraduate student participation in research. Not included in the accreditation documents and not yet included in the URSA database are undergraduate students who are employed as research assistants. URSA has been working with UAF Human Resources and the UAF Office of Planning, Analysis, and Institutional Research (PAIR) to identify a means to include such students in the database.
 - c. An online version of UAF Research Day has been created within the Institutional Repository, which is a joint effort of URSA and Library Sciences Staff. <https://scholarworks.uaf.edu/>.
 - d. Gary Hagestead in the Office of PAIR continues to work on streamlining the process of populating the URSA database to allow for more detailed and comprehensive tracking and reporting of undergraduate student research and creative scholarly activities. URSA has been working with the various UAF Deans to identify research-focused undergraduate courses in their respective academic programs to generate more accurate and comprehensive data on the involvement of UAF undergraduates in research.
5. Curriculum Development
 - a. URSA (Undergraduate Research and Scholarly Activity) courses offered in AY2015
 - i. URSA 192 Introduction to Research and Scholarly Activity at UAF (Instructor: Barbara Taylor; Enrollment: 3 students)
 - ii. URSA 195 Introduction to One Health (Instructor: Lori Gildehaus; Enrollment: 6 students)

iii. URSA 295 BLaST Bootcamp (I

b. Research Day

- i. The UAF Research Day was held on 26 April 2016; a total of 142 undergraduate students presented at the event.
- ii. Dean's Choice Awards (\$250 per school/college) were given for each college or school; the awardees and their poster title for each college/school were as follows:
 - a. College of Engineering and Mines (CEM) Aven Bross and Max Hessknoll (Simultaneous localization and mapping [SLAM] on RobotMoose robotics infrastructure)
 - b. College of Liberal Arts (CLA) Jessica Obermiller (The headscarf project, exposing

3. 6 ■ as active resources to develop and enhance current and future opportunities and initiatives as well as provide direction for the URSA mission. The current structure is that one group of faculty with general planning (the URSA Advisory Board) and a separate group of faculty (and some staff and student members) reviews student and faculty mentor applications (the URSA Review Panel). However, members of both groups may provide feedback on the operation of URSA as well as bring forward new ideas, initiatives, and concerns related to the URSA mission. In terms of the specific structure and primary responsibilities of these two groups, we have the following: (1) the Advisory Board consists of faculty members from each academic college/school at UAF and meets once each semester to discuss policy initiatives and

Table 1. The number of URSA applications (student project, student travel, mentoring combined), awards, and awarded dollars for each college for AY2015-2016. The dollar amount awarded also includes awards to students for Research Day poster presentations.

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Table 2. The number of URSA applications (Apps), awards, total dollar amount awarded (Dollar Amt.) to all amount awarded by award type

Table 3. The number of URSA applications (AP), awards (Aw), and dollar amount (DA) for each college/school by awards type for AY2016.

| | B | | | C | | | M | | | E | | | D | | |
|-----|----|----|----------|----|----|---------|----|----|----------|----|----|-----|----|----|-------|
| | AP | Aw | DA | AP | Aw | DA | AP | Aw | DA | AP | Aw | DA | AP | Aw | DA |
| CEM | 4 | 0 | \$0 | 17 | 2 | \$4,000 | 5 | 3 | \$14,930 | 3 | 0 | \$0 | 7 | 2 | \$250 |
| CLA | 12 | 6 | \$13,210 | 13 | 5 | \$9,925 | | | | | | | | | |