

**Annual Report for the Office of
Undergraduate Research & Creative Activities
2015-16**

Richard Ignace

Director of Undergraduate Research & Creative Activities

Honors College

EAST TENNESSEE STATE UNIVERSITY

2016 June

◇ *MOTTO:*

Pursue your passion.

◇ *MISSION:*

To promote and advance the sciences, humanities, and arts by engaging and supporting undergraduates in research.

◇ *VISION:*

To make undergraduate research an integral part of the university experience at ETSU.

I. Introduction

The Director of Undergraduate Research & Creative Activities performs a number of functions and oversees several programs and events. These include:

Programs:

- Student-Faculty Collaborative Grants (SFCGs)
- Summer Fellowships (SFGs)
- Research Discovery Grants (RDGs)
- Travel Grant Awards (TGAs)

Events:

- Boland Symposium
- Lab Safety Workshop
- Oral Presentation Workshop
- Posters-at-the-Capitol

Service:

- Member of the Honors College
- Research Advisory Committee
- Member of the Council for Undergraduate Research (CUR)
- Other committee service or advisory roles

Purpose of the Office:

The Office is charged with supporting and/or providing educationally enriching activities for undergraduate students in the area of scholarly engagement. In terms of scope, the Office has adopted a definition of “research” as taken from the Council of Undergraduate Research (www.cur.org):

An inquiry or investigation conducted by an undergraduate student that makes an original intellectual or creative contribution to the discipline.

The Annual Report

The annual report details the activities of the Office from fall through summer. This report covers the period of July 2015 through June 2016.

Note: Stated funding values come from records kept by the Director. The funds represent commitments made by the Director for the various programs. It is possible that some funds went unspent, or that some funds were expended outside the reporting year (e.g., some funds associated with summer fellowships may be spent after July 1st). Therefore, reported values represent *good-faith* commitments for funds and student participation within the stated period of the report.

Please direct all questions/suggestions/corrections to:

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II. Travel Grant Awards

Summary:

| Category | Value |
|-------------------|---------|
| Proposals: | 24 |
| Grants: | 24 |
| Students served: | 24 |
| Faculty advisors: | 19 |
| Colleges: | 2 |
| Departments: | 9 |
| Funds committed: | \$9,378 |

Comments:

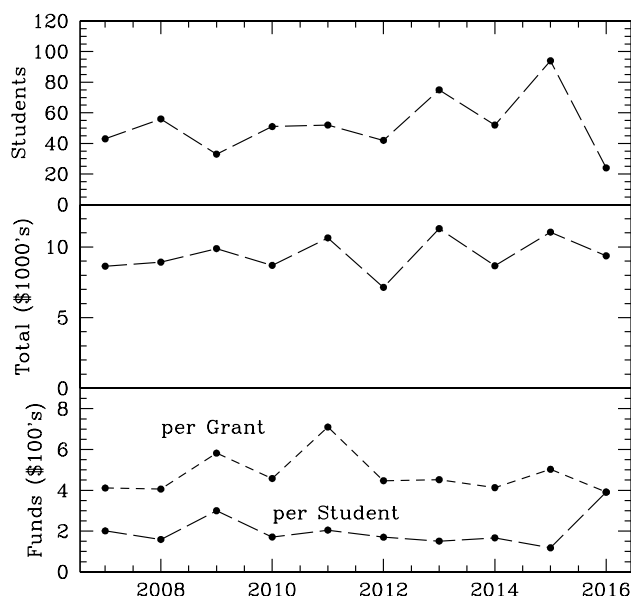
1. The majority of travel grant awards were requested by and provided to students in the College of A&S.
2. The majority of travel grant awards were accompanied by additional

Long-Term Trends:

- The figure at right displays the number of students served with travel grants for each year (top panel), the total funding for travel grants each year (middle panel), and funds spent per grant and per student each year (bottom panel).
- For the latter the amount per grant is the short dashed line, and the amount per student is the long dashed line. Although the majority of grants support travel for individual students, some grants support travel for groups, thereby explaining the difference between these two curves.

funding from the student or advisor Departments, ranging from tens of dollars up to around \$1000. In some cases assistance came from other sources, such as fund raising, a grant from the conference itself, or the advisor.

3. Average expenditure per student: \$391.
4. Average expenditure per award: \$391. The maximum award per individual is \$500. Some requests can involve groups, and so awards can exceed \$500 in such cases. There were no travel award requests by groups in 2015-16.



III. Student-Faculty Collaborative Grant Awards

Summary:

Fall Cycle

| Category | Value |
|--------------|----------|
| Proposals: | 18 |
| Awards: | 12* |
| Colleges: | 5 |
| Departments: | 9 |
| Requested: | \$20,392 |
| Awarded: | \$13,648 |

* Two awards were Research Abroad.

Spring Cycle

| Category | Value |
|--------------|----------|
| Proposals: | 11 |
| Awards: | 11 |
| Colleges: | 4 |
| Departments: | 8 |
| Requested: | \$11,504 |
| Awarded: | \$10,318 |

Comments:

1. The majority of student-faculty collaborative grant awards were requested by and provided to students in the College of A&S.
2. Maximum possible award: \$1,200.
3. Average funding request (combined cycles): \$1,100.
4. Average funding award (combined cycles): \$1,042.

Long-Term Trends:

Refer to the figure in the following section for Summer Fellowships, where Long-Term Trends for research grants are summarized.

IV. Summer Fellowship Grant Awards

Summary:

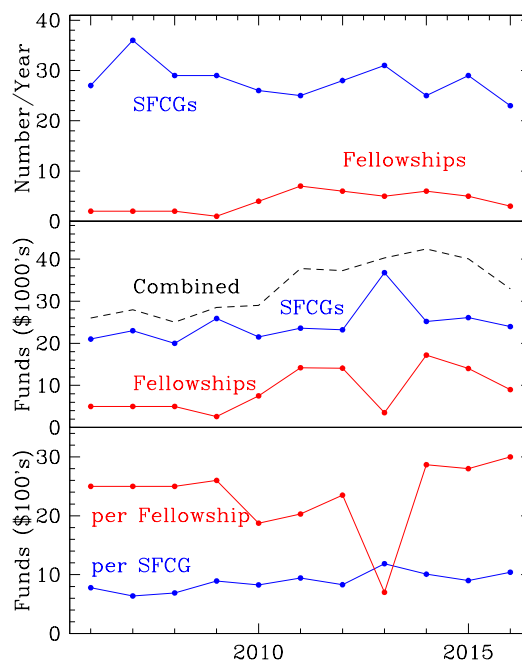
| Category | Value |
|--------------|----------|
| Proposals: | 6 |
| Awards: | 3 |
| Colleges: | 4 |
| Departments: | 6 |
| Requested: | \$16,407 |
| Awarded: | \$8,997 |

Comments:

1. Half of summer fellowship awards were requested by students in the College of A&S.
2. Maximum possible award: \$2,500 (scholarship) + \$500 (research expenses).
3. Average funding request (combined cycles): \$2,735.
4. Average funding award (combined cycles): \$2,999.

Long-Term Trends:

- The Figure displays the number of proposals awarded each year (top panel), the funds committed each year (middle panel), and the funds committed per grant each year (bottom panel). Blue is for the SFCG program; red is for the Summer Fellowships.
- Note that for the middle panel, the dashed line (black) indicates the combined funds for both the SFCG and Fellowship grants.



V. Laboratory Safety Class

Summary:

Two courses were provided: one early in the fall semester, and one early in the spring semester.

Comments:

Students awarded a summer fellowship and in need of the lab safety class will normally not have the opportunity until early in the fall semester, which is after the summer project is completed. Starting in 2016, the lab safety class will be offered prior to the beginning of the summer project. The course will be made available via the online version, as demand will be small.

VI. Workshops

Summary:

The oral presentation workshop was offered to students prior to the Boland Symposium. Around 30 students were in attendance. Around 60 students presented at the Boland.

Comments:

A pilot for a poster presentation workshop was conducted in collaboration with Dinah DeFord of the McNair program. The poster presentation workshop was held as a guest lecture for the Foundations in Research course. The Director also conducted a pilot for The Joy of Research as a guest lecture for Honors Colloquium.

VII. Posters at the Capitol

Summary:

Seven students were selected, and five students were in attendance. Students met with their legislators and interacted with peers. Lieutenant Ron Ramsey was kind enough to present a welcome address over lunch and to take photos with the ETSU contingent.

VIII. Undergraduate Research Symposium, or Boland Symposium

Summary:

The breakdown for symposium contributions is:

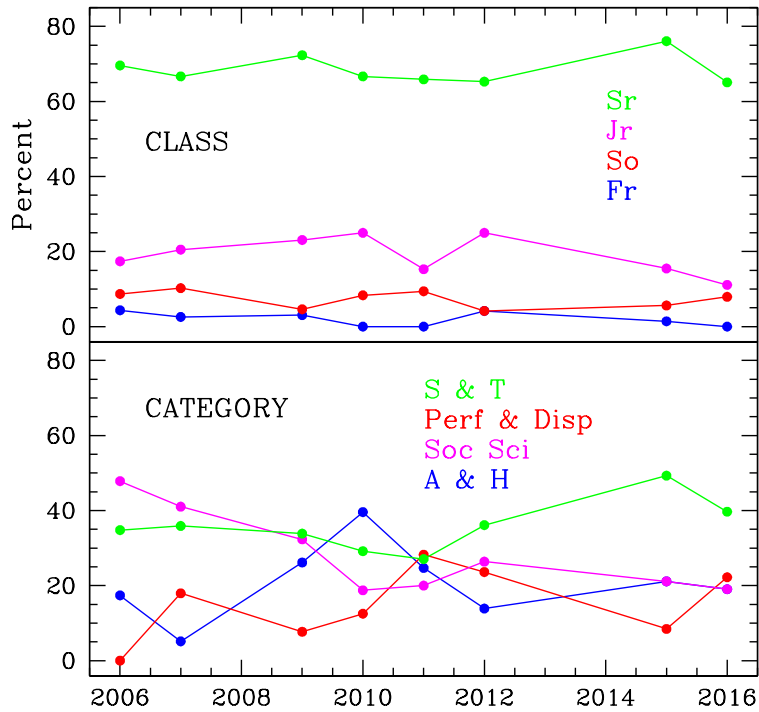
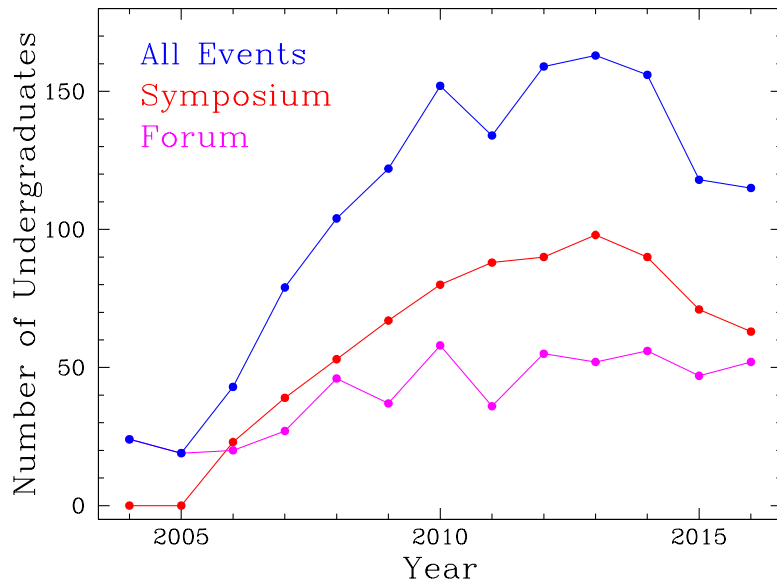
- 63 presentations in total
- 63% of presenters were seniors; 33% were not. (Note: There were 11 late entrants who were assumed not to be seniors.)
- 43% of presentations were for thesis; 57% were not.
- Categories:
 - 12 (19%) in Arts & Humanities
 - 14 (22%) in Performance/Visual Art Display
 - 12 (19%) in Social Sciences
 - 25 (40%) in Science & Technology

Comments:

The majority of presentations came from the College of Arts & Sciences. Participation in Performance were significantly increased. A late call to the Fine and Performing Arts program led to 3 late entrants. Professor Smith of Art & Design recruited 8 late entrants to exhibit works from a course he was teaching.

Long-Term Trends:

- The top figure (next page) shows the number of undergraduate presenters at ETSU meetings. Chief among these meetings are the Boland Symposium (specifically for undergrads; oral only presentations) and the Appalachian Forum (where undergrads can present posters).
- The lower (next page) is a double-panel figure showing a demographic breakdown for the Boland Symposium. The upper panel shows participation by student class (Sr=seniors, Jr=juniors, So=sophomores, Fr=freshmen). The lower panel indicates the distribution of presentations among the major categories of Science & Technology (S&T), Performance or Visual Display, Social Sciences, and Arts & Humanities (A&H).



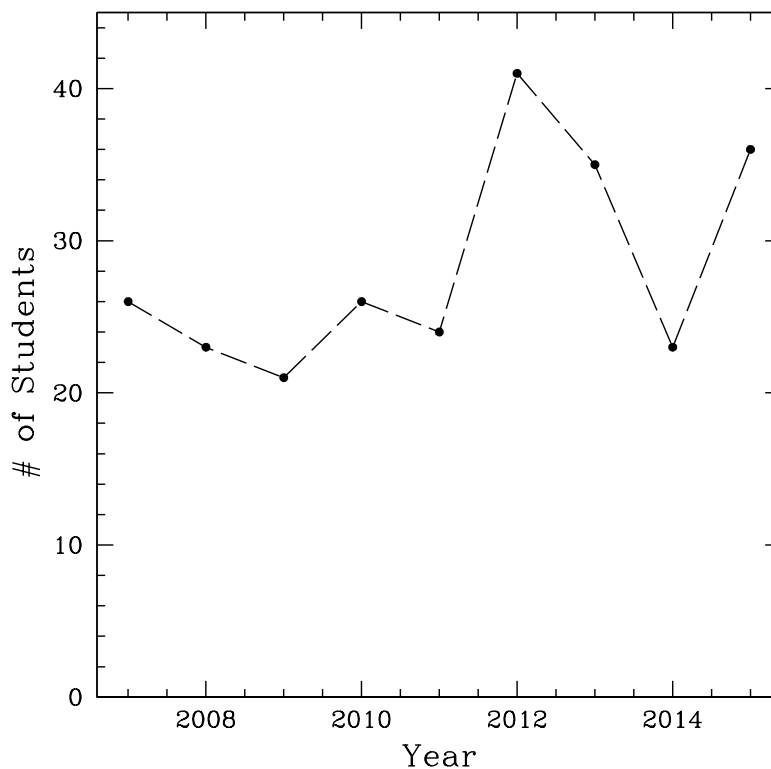
IX. Research Discovery Program

Comments:

A typical federal work-study (FWS) student works about 10 hours a week for 15 weeks in each semester. That is 300 hours for the year. With a minimum wage of \$7.25 per hour, the value of the work, per student, is \$2,175. Students with Appalachian performance scholarships (APS) in the Research Discovery Program are expected to serve about half that number of hours. Although the APS students are not paid for their time, they do receive a scholarship, and they are required to work a certain number of hours as a requirement of receiving those funds. Consequently, the time served by APS students, evaluated at minimum wage, has a wage-equivalent value that can be calculated.

With roughly equal numbers of FWS and APS students, the average cost per student is about \$1800 in time. Given that the program historically averages 28 students per year, the annual funding-equivalent value of the Research Discovery Program is about $28 \times \$1,800 = \$50,400$.

Long-Term Trends:



X. Summary Remarks

1. Two especially notable events took place in Fall 2015 concerning opportunities for undergraduates to participate in conferences:
 - The first meeting of the annual Tennessee Experiential Learning Symposium (TELS) was held on the campus of the University of Tennessee-Knoxville in October 2015. The hosting institution will alternate from one year to the next. TELS showcases undergraduate achievement in research, creative work, service learning, and study abroad by gathering students from across the state to give oral and poster presentations.
 - ETSU is a member of the SoCon athletic conference. SoCon seeks to have academic components, of which one will be an annual undergraduate research conference, known as the SoCon Undergraduate Research Forum (SURF). Representatives from all 10 institutions of SoCon were involved in discussions and planning. The first meeting of SURF will be in October 2016. The meeting will in general be held every other year, so as to avoid conflicting with NCUR when it is held in the eastern portion of the United States.
2. In spring 2016 the Director undertook an investigation into the possibility of promoting crowdfunding by undergraduates as a new means for students to fund their research endeavors. A new organization called Crowdfunding for Research Experiences for Undergraduates (CREU) was launched in spring 2014. The website for the organization provides a platform for crowdfunding of undergraduate research, with protocols for oversight and accountability. For students so inclined, CREU could provide an entrepreneurial option for research funding, allowing students to take greater ownership of their projects, interact with a broader community of supporters, and fund (in whole, or part) or extend (as supplement) their work.
3. The Director gave a report to the Academic Council on the participation of ETSU undergraduates in research. Data were collected from various units at ETSU, with the aid of Dean Slagle and Vice Provost Duncan. Although data collected were neither uniform nor complete, a model was devised to estimate undergraduate participation in research and creative activities for the academic year 2014-15, which was found to be about 900 students. The results were roughly consistent with data from NSSE. The conclusion was that around 1 in 4 graduates of ETSU will typically have had a research experience.
4. One challenging question that arose during the preceding effort was to determine what activities qualify under the definition of research as adopted by the Office. The Director tentatively proposes that those activities which qualify must involve (1) the

student having a mentor, and (2) the outcomes being publically disseminated. In the first it takes a mentor to determine if a student activity constitutes scholarship. In the second outcomes that are never made more broadly known within a discipline or community (in an appropriate manner) cannot be said to be scholarship, for the purpose of inclusion in reporting by this Office. From the perspective of this Office, scholarly activity ultimately cannot be exclusive to the mentor and student. On the other hand, the Office is not capable of determining whether the outcomes for every grant and fellowship are shared broadly. It must be assumed that outcomes are eventually shared.

5. In conjunction with the previously described effort, a question arose as to distinctions in the nature of scholarship/research between the sciences and the broad area of “the arts”. It is the opinion of the Director that both “research” and “creative activity” (as the phrases are commonly used) contribute to scholarly knowledge. “Research” is generally understood to contribute to factual knowledge (impactful in evidence-based practices with outcomes requiring interpretation); “creative activity” is generally seen to contribute to cultural knowledge (impactful in perspective-based practices with outcomes requiring interpretation). As an example, the former may lead to advances in the quality-of-life of human beings via medical advancements, whereas the latter may lead to advances in the quality-of-life of human beings via reflection on the human condition.