OFFICE
of RESEARCH *and*
GRADUATE STUDIES
UtahStateUniversity

Annual Report
to the Faculty Senate for fiscal year 2015

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Vice President for Research and
Dean of the School of Graduate Studies

Contents

Executive Summary

The annual report to the Faculty Senate covers the major activities of the Office of Research and Graduate Studies (RGS), the USU Research Council and the USU Graduate Council from July 1, 2014 through June 30, 2015.

FY 2015 brought another record year of sponsored awards, totaling $232.8 million of campus research awards, the USU Research Foundation awards and other federal grants. This surpasses FY 2014's $221.4 million in awards, in large part due to a significant increase in research funding for the academic colleges. Additional financial support this year also came from continued funding from the State of Utah legislature designated specifically for the enhancement of graduate education.

Throughout the year, RGS staff members have implemented a variety of new initiatives and improvements to better serve USU faculty, staff and students in support of three main goals: growing and supporting USU's research portfolio, fostering success of USU's graduate students, and enhancing USU's undergraduate research program.

This report includes those efforts, with a detailed analysis of key initiatives within RGS and its related divisions. The latter half of this report includes a "by-the-numbers" section, as well as year-in-reviews of each of the RGS divisions.
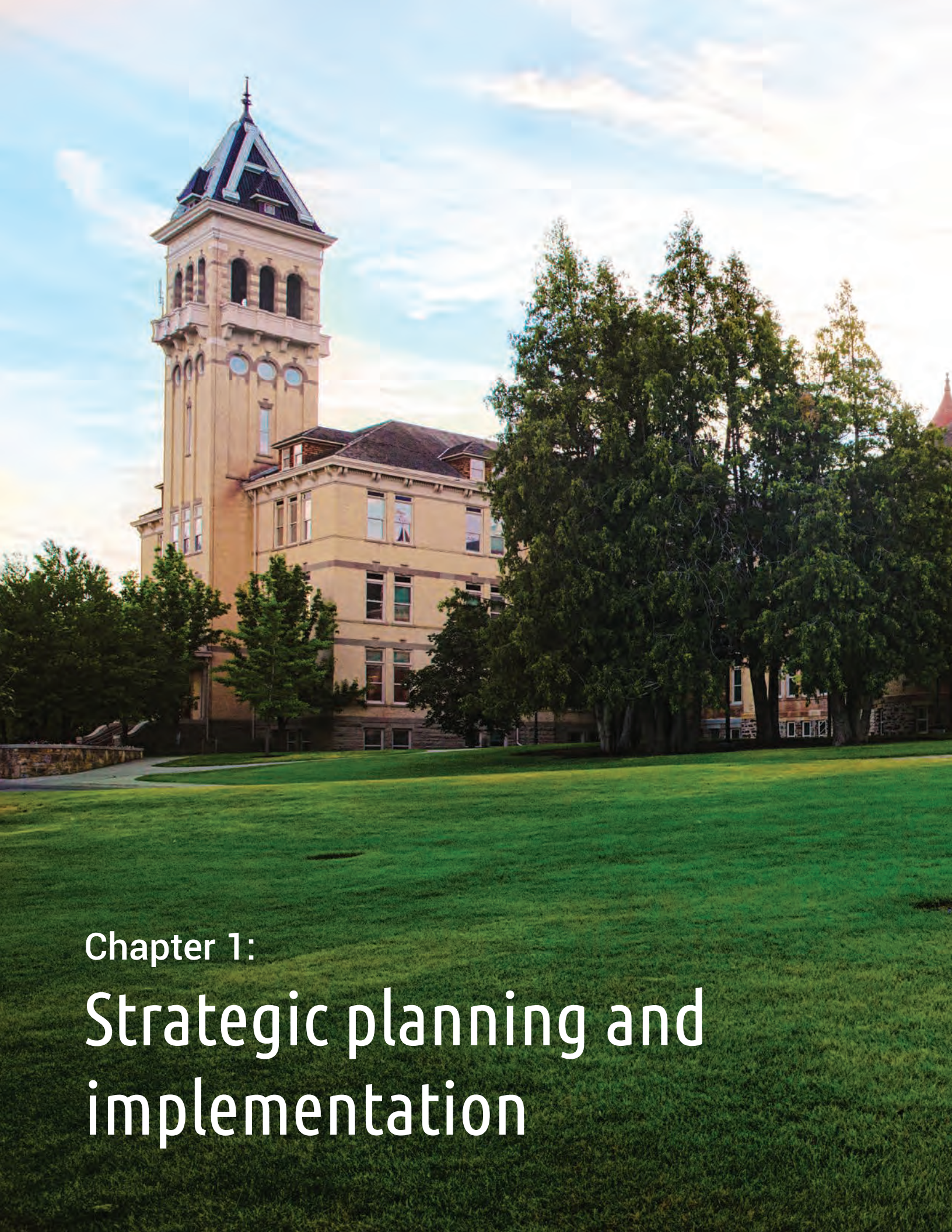
Chapter 1:
Strategic planning and implementation

Office Overview

Mission statement

The mission of USU's Office of Research and Graduate Studies is to facilitate a culture of excellence in research, scholarship and creative activity that spans the lifecycle of faculty and students through operational, training, funding and compliance support.

Values

Six core values guide the way in which RGS executes its mission and formulates its key strategic goals and strategies. In the way a mission statement informs *what* RGS does, the values define *how* it is best accomplished. Those values are listed below.

RGS Values

Value	Belief Statement
Individual capacity development	Faculty and graduate students should continue to grow their understanding of how to best propose, conduct and report research and scholarly activities.
Integrity and safety	Scholarship should be conducted with top consideration toward exceeding regulatory and moral standards.
Student engagement	Students are a core focus of a land-grant institution. They can have better balanced lives and educational experiences when they engage in research opportunities.
Interdisciplinary integration	Research should not live within silos; all scholars can benefit from interdisciplinary relationships.
Application	Research and scholarship should embrace the land-grant mission of providing meaningful impact for the state, nation and world.
Innovation	All activities should undergo conistent evaluation for improvement in effectiveness and efficiency, and those opportunities should be implemented whenever possible.

RGS goals and strategies

Grow and strengthen USU's research portfolio	*Foster success of USU's graduate students*	*Enhance USU's undergraduate research program*
Increase proposal quality	Increase student financial support	Encourage greater participation in undergraduate research
Strategically fund research initiatives	Enhance recruitment efforts	Encourage recruitment of high achieving students
Increase research infrastructure	Improve departmental programs	Provide funding opportunities for undergraduate research projects
Provide efficient research support services	Provide value-added opportunities	Recognize undergraduate research successes
Communicate research successes	Provide efficient graduate support services	Train students in research best practices

Goals and strategies

Three main goals have been established to execute the mission of Research and Graduate Studies. For each of those goals, five strategies have been agreed upon to accomplish the goals, as well as further the RGS values. All initiatives undertaken by RGS fall under one of these strategies.

RGS organization and divisions

The Office of Research and Graduate Studies oversees eight divisions: the School of Graduate Studies, Sponsored Programs, the Institutional Review Board, Research Development, Animal Care and Use, Integrity and Compliance, Environmental Health and Safety, and Graduate and Undergraduate Research. Each of these divisions works to support the RGS mission and strategic goals. In total, RGS has 54 full-time employees. The Office also coordinates the USU Research and Graduate Councils.

RGS Office staff changes

Several changes were made in RGS personnel and division structure in FY 2015. Proposal

Research and Graduate Studies

Mark McLellan (VP and Dean)
Jeff Broadbent (Assoc. VP & Assoc. Dean)
Richard Inouye (Assoc. VP & Assoc. Dean)
Scott Bates (Assoc. VP & Assoc. Dean)

Research Council

Graduate Council

USU Research Foundation

Academic Departments

Administrative Staff
Teresa Seeholzer (Asst. to the VP & Dean)

Professional Staff
Craig Kelley (Finance Officer)
Anna McEntire (Director of Project Management & Comm.)

RGS Strategic Goals

Foster success of USU's graduate students.

Grow and strengthen USU's research portfolio.

Enhance USU's undergraduate research program.

School of Graduate Studies	Sponsored Programs	Research Development	Integrity and Compliance	Grad & Undergrad Research
	Kevin Peterson (Exec. Dir.)	Jeri Hansen (Manager)	Russ Price (Manager)	
	Institutional Review Board	Animal Care & Use LARC/IACUC	Environmental Health & Safety	
	Nicole Vouvalis (Admin)	Aaron Olsen (Director)	Steve Bilbao (Director)	

Nicole Vouvalis joined USU this year as IRB administrator.

Development and Research Development were combined into a new single division (Division of Research Development). Jim Dorward, who oversaw Research Development on a part-time basis, retired; **Jerilyn Hansen** has been appointed director of the reorganized division.

John Hanks, system administrator for the Division of Research Computing, left the university, and RGS began exploring consolidated high performance computing solutions (discussed on page 10).

In December 2014, **Dan Perry** was hired as an RGS systems analyst to guide several large-scale projects lined up, including the implementation of Kuali Research (see page 11) and other Kuali modules and the customer relationship management system (Recruiter) that will be used to process graduate student admissions.

True Rubal retired as administrator of the Institutional Review Board after nearly 20 years in the position. **Nicole Vouvalis** was hired to replace her and has overseen other personnel changes within the division.

Strategic Goal 1: Grow and strengthen USU's research portfolio

Mark McLellan speaks at a press conference in September 2014 to announce a record year of research funding for FY 2014.

FY 2015's record funding year of $232.8 million is largely attributable to an 11% increase in research funding to academic colleges, at a total of $111.3 million. A detailed five-year breakdown of funding for the colleges, as well as the USU Research Foundation and other funding sources is included on page 41.

RGS divisions support the goal of growing and strengthening USU's research portfolio, through assistance with integrity and compliance, as well as proposal and funding support. A more complete overview of initiatives supporting this strategic goal is included on page 15, activities of the Research Council are on page 29, and individual division reports are included in Chapter 4.

This section highlights new and expanded initiatives established in FY 2015.

Strategy: Increase proposal quality

Washington, DC funding agency trip

The second annual funding agency trip to Washington, DC took place in October 2014. Nine faculty representing seven colleges spent two

days visiting funding agencies that included the Department of Education, the American Chemical Society, the National Institutes of Health, the National Science Foundation, the Office of Naval Research, the Department of Energy, the National Oceanic and Atmospheric Administration, the U.S. State Department, the Environmental Protection Agency, and the National Endowment for the Humanities. The 2013 and 2014 funding agency trips have been seen as very beneficial to the faculty, and the fall 2015 trip will include 18 faculty members, 11 of whose travel will be funded by their colleges.

Training for Research Faculty (TRF)

TRF is a new workshop series that features training on topics of special interest to USU researchers, helping to enhance individual capacity development of USU faculty.

TRF focuses primarily on research skills, replacing and augmenting previous new faculty research training workshops held in the past. Participation (for the most part) is voluntary; as such, it has been formatted to excel at the following characteristics to promote attendance and participation:

- Reputation of excellence
- Momentum of growth
- Structured for faculty value
- Well planned and executed
- Interesting (and even entertaining)

TRF workshops were often focused on the needs of new faculty members and included the following topics: graduate student recruitment, RFAST training, data management, NSF CAREER awards and tools for large project management.

Attendance at the workshops ranged from 25 to 70 attendees. Evaluations were performed at the end of each workshop (with a like/dislike option), and no "dislikes" were received. In a follow-up survey with a 1 to 10 scale of quality (1 being poor quality and 10 being high), 75% of attendees gave the workshops at least a 7.

Strategy: Strategically fund research initiatives

Seed grants
RGS continues to support three different seed grant programs that carry unique missions/goals and expected outcomes. In FY 2015, a total of 44 RC, 2 GEM, and 3 SPARC applications were submitted. The overall quality of applications was again very high, and 26 projects (24 RC and 2 GEM) were awarded funding. Several of the successful RC projects were multidisciplinary or involved partnerships between junior faculty and more senior colleagues. RGS believes such interactions have great potential to enhance faculty success in securing extramural support, and strongly encourages collaboration among faculty in future seed grant applications. A full explanation of the grants is included on page 50, and a table of awards is included on page 42.

Faculty start-up packages
Faculty start-up monies provide new hires with the resources they need to establish a research program and gather preliminary data to support their first external grant proposals. RGS partners with colleges to offer competitive start-up packages. A profile of startup commitments for the past five years is included on page 42.

To better ensure that USU has resources to offer competitive start-up support to new faculty hires, RGS determined that beginning

Abby Benninghoff (Animal, Dairy and Veterinary Sciences), along with Lisa Berreau (Chemistry and Biochemistry) received a Research Catalyst seed grant for CO Release at the Mitochondria.

in FY 2015, contributions to the equipment/post-doctoral researcher portion of new faculty start-up packages will be distributed over three installments. The first installment is provided when the faculty member is first hired, then the second and third installments are transferred at the start of the two successive fiscal years.

Strategy: Increase research infrastructure

High performance computing

The departure of the director of the USU Division of Research Computing prompted discussions about partnering with the University of Utah's Center for High Performance Computing (CHPC). The CHPC now offers USU faculty and students the same access that they provide to their own faculty and students, and the high speed data connections between USU and the CHPC, together with their much larger staff and computing resources, provide a new avenue for USU researchers to access high speed computing. In FY 2016, RGS will be making a financial investment in the CHPC to gain a level of priority access for USU users.

Core facilities

USU's new microscopy core facility was officially launched with an open house celebration in February. The microscopy core is housed in SER 005, and provides microscopy services, project consultation, and user training for scanning electron microscopy and laser dissection microscopy. Dr. John Shervais is serving as the core director, with input and support from a 12-member faculty advisory board. A full-time and highly experienced operator, Dr. Fen-Ann Shen, provides assistance and training on core instruments to faculty, students and staff.

RGS provides a subsidy so that the facility may operate on a $300 annual membership basis to

On February 11, a ribbon-cutting ceremony was held for the new Microscopy core facility, which will give faculty and student access to new state-of-the-art microscopy equipment at a subsidized rate. (Pictured: Fen-Ann Shen, Mark McLellan, John Shervais and Jeff Broadbent.)

all USU faculty, staff, and students. For those outside USU, payment is on a fee-for-service basis. In FY 2015, more than 174 people visited the microscopy core, including faculty, students, or staff from five USU colleges, as well as the USU Research Foundation and one outside company. To learn how you can access this state-of-the-art facility to support your research, visit http://www.mcf.usu.edu/.

Annual equipment matching fund
RGS offered another round of internal capital equipment grants, with continuation of the 50% (1:1) matching funds requirement. Applications were accepted from individual USU researchers, teams of researchers, or by departments or colleges. Twenty-two applications with requests totaling $309,000 were received. RGS staff and college associate deans for research performed merit review of those applications and selected 12 proposals totaling $199,000 for funding. A table of all the equipment purchased with these grants is included on page 44.

Strategy: Provide efficient research support services

Multi-year Kuali Software Implementation for Sponsored Research
During FY 2015, RGS began the process of implementing a new university grants system, Kuali Research. Kuali offers campus-wide authentication and routing. Using Kuali, researchers will be able to complete proposal applications and all required proposal materials electronically, replacing the need for paper copies of the Proposal Approval Form (SP-01) and budget template. Implementation will continue internally throughout FY 2016, with campus roll-out to occur fall 2016.

EHS Assist
In order to better ensure the safety of laboratories on campus, the Division of Environmental Health and Safety has implemented a new online system, EHS Assist, to record and track certifications of all USU safety trainings, as well as update labs' chemical and biological inventories. This system is designed to simplify and streamline these processes, making them easier to monitor and keep up to date. It also allows departments to review the training status of all employees.

Extra service compensation (ESC)
USU recognizes that employees may make unusual contributions to the university that are both related and unrelated to their primary work assignments. To affirm institutional support for appropriate, operations-based standards for ESC, and to ensure compliance with recent federal regulations, USU revised and approved policy 376, "Extra Service Compensation." The new policy defines extra service as any service rendered to USU that is not specifically identified as part of an employee's full workload, and outlines specific conditions under which ESC may be approved. It is important to note that compensation for extra service must be clearly approved as described in the policy before any such work is performed. A copy of the newly revised policy is provided on page 30.

Uniform Guidance
In December 2014 new guidance from the U.S. Office of Management and Budget (OMB) became effective. Units throughout USU's administration worked together during the year to prepare for the changes reflected in the new Uniform Guidance, which combines guidance from eight former OMB circulars. These changes were part of the federal government's efforts to streamline processes in grant administration, which has a major impact on USU.

Regulations that were affected include effort reporting, extra-service compensation, computer purchases, charging of administrative and clerical costs and subrecipient monitoring. USU's approach to the reform included coordinated efforts to modify and augment existing policies and procedures so that they meet the new requirements.

RFAST training
focused on providing awareness of financial and administrative requirements associated with research grants and contracts, has continued during the year. To date, over 900 researchers, including faculty, staff and students, have

completed RFAST training through the Canvas system. In the coming months, RFAST will be migrated to USU's learning management system, Avatar, in order to more effectively track this mandatory training.

Data management, storage, and accessibility
RGS, along with several entities across campus, including the Library, Central IT, and the Information Security Office (the Data Management Group, collectively), continued to monitor and plan for the pending implementation by federal funding agencies of open access requirements pertaining to research data results.

The Data Management Group worked during FY 2015 to establish what USU's response to this mandate would be. The Library was designated as the main point-of-contact to assist researchers needing to make their data publically available. Librarians will walk researchers through USU's available resources and help them decide the best place to store data and make it publically accessible to satisfy the new federal requirements.

The majority of research data can be stored and made available in Digital Commons. For those researchers who need very large storage, Central IT has identified several options—Box.com being one of them—and continues to stay abreast of this rapidly changing facet of the open access issue.

Strategy: Communicate research successes

TEDxUSU
RGS organized its third year of TEDxUSU, an independently organized TED-like event dedicated to sharing "ideas worth spreading." TEDxUSU was expanded to a half-day, three-session conference focused on the theme "Friction." Tickets to the event, held in the Caine Performance Hall, sold out within hours. Olympic silver medalist Noelle Pikus Pace and award-winning author Orson Scott Card headlined the event, which also featured talks by USU faculty and students. The preparation process was treated as a training experience for speakers to hone their communication and presentation skills, which a view toward more than just a TEDx talk. Speakers were selected through an audition process and were coached and supported by RGS staff for more than five months as they prepared their talks and performances.

New this year was an interactive second session in the Kent Concert Hall atrium, where attendees mingled with TEDxUSU speakers, networked with fellow audience members, viewed innovative exhibits and presentations, and helped create artistic compositions.

Over three years, TEDxUSU talks have been viewed nearly 325,000 times on YouTube.

A sold-out crowd packed the Caine Performance Hall for the third TEDxUSU event, where 13 faculty and students gave engaging talks and performances.

Left: Jason Quinn (Engineering) gives a short and compelling reason to keep cars' tires properly inflated. Right: This year's TEDxUSU included a new, interactive second session for guests to dive deep into the talks.

TEDxUSU 2014 Presenters

Presenter	College	Department
David Brown	Science	Mathematics
Jenna Glover	Education and Human Services	Psychology
Matthew LaPlante	Humanities and Social Sciences	Journalism and Communication
Jason Nicholson	Art	Music
Jason Quinn	Engineering	Mechanical and Aerospace Engineering
Lindsey Shirley	Agriculture and Applied Sciences	Family and Consumer Sciences
Jarod Raithel	Natural Resources	Ecology
Jim Davis	Business	Management
Melanie Domenech Rodriguez	Education and Human Services	Psychology
Deborah Fields	Education and Human Services	Instructional Technology and Learning Sciences
Evelyn Funda	Humanities and Social Sciences	English
Dennise Gackstetter	Art	Art and Design
Nicole Martineau	Science and Art	Biology and Theatre

Sunrise Session 2014-15 Presenters

Presenter	College	Dept.	Title
Merideth Ferguson	Business	Management	You Can't Leave It at the Office: Fallout from Toxic Workplace Environments
Victor Lee	Education and Human Services	Instructional Technology	Engaging Bodies and Minds in K-12 Education
Brian Higginbotham	Education and Human Services/ Extension	Family, Consumer and Human Development	Relationship Education: Skills for Couples, Parents and Stepfamilies
Mac McKee	Engineering/ Utah Water Research Laboratory	Civil and Environmental Engineering	50 Years: Utah Water Research Laboratory

Sunrise Sessions

Now in its ninth year, Sunrise Sessions bring USU research presentations to our Salt Lake constituents on a quarterly basis. Jointly administered with the USU Advancement Office, the program continues to be supported by Regence.

In FY 2015, four speakers presented on their research. About 100-150 people attended each Sunrise Session in FY 2015, and all talks were posted to USU's YouTube channel for online viewing. In FY 2016, RGS will assume full responsibility for the Sunrise Sessions.

Research Week

On April 6-11, RGS hosted USU's 11th annual Research Week, showcasing the best of the best in undergraduate, graduate and faculty research.

Research Week gave student researchers center stage through events such as Ignite USU and the Student Research Symposium, and celebrated faculty research at the annual Awards Gala and the D. Wynne Thorne Lecture.

Throughout Research Week, the Office of Research and Graduate Studies formally recognized more than 50 college awardees: Faculty Researchers of the Year, Graduate Researchers of the Year, Graduate Instructors of the Year, Undergraduate Researchers of the Year, and Undergraduate Research Faculty Mentors. Two university awards, the D. Wynne Thorne Career Research Award and the Graduate Mentor of the Year, were also given. Hundreds of other students and faculty were recognized on a more informal basis throughout the week.

Ignite USU is a key feature of Research Week, giving students the opportunity to share the stories behind their research in fast-draw five-minute talks. The event, held in the Library south atrium, attracts more than 150 attendees and hundreds of YouTube views.

Initiatives to grow and strengthen USU's research portfolio

Strategies	Before 2013	2013-14	2014-15	2015-16
Increase proposal quality.	Central and embedded proposal development specialists			
	Agriculture, Education	Engineering		Extension
	Proposal Writing Institute			
	Grant-writing workshops			
	IGERT workshop	Arts/Humanities WS		
	Funding Finder email newsletter			
	Online limited submission process			
	New Faculty Research Orientation			
	New Faculty Research Training Series			
		Faculty trip to visit DC agencies		
			DMP Data Management Tool	
			Training for Research Faculty (TRF X5)	
Strategically fund research initiatives.	30% F&A returned to generating units + $378K in dean's strategic funding			
	Startup funds for new faculty			
	Biannual seed grants program			
	Annual Equipment matching fund			
Increase research infrastructure.	RGS core facilities: LARC and Microscopy			
	High Performance Computing			HPC U/U partnership
	Qualtrics support and training			
	NMR support			
	Herbarium support			
Provide efficient research support services.	Proposal submission, award, and closeout			
			SPD restructure	
			Kuali Research	
	SP-01 routing through DocuSign			
	Researcher Dashboard			
	Campus Environmental Health and Safety			
			EHS Assist Tool	
	Research integrity and compliance			
	Research Scholars Certification RCR training			
	DHHS COI policy update	Time & Effort, ESC policy updates		Uniform Guidance
			RFAST training	
	Human/animal research subjects protection			
	AAHRPP and AALAC re-accreditation			
	Protis online protocol submission system			
	RSA training for certification in sponsored programs administration			
		Basecamp coordination tool		
				Website update
Communicate research successes.	Research Week			
	Awards Gala	Ignite	Student awards	Symposium
	D. Wynne Thorne and USU Researcher of the Year recognition awards			
	Sunrise Sessions			
	Ascend email newsletter			
	RGS social media (FR: USUResearch, Twitter: @USU_RGS, YouTube: USU RGS)			
	TEDxUSU conference			
			Fall PI forum	
			RGS Coffee Breaks	

Strategic Goal 2: Foster success of USU's graduate students

The School of Graduate Studies is charged with supporting graduate student education, from recruitment through commencement. A general overview of initiatives supporting this strategic goal is included on page 22. Additionally, activities of the Graduate Council are listed on page 34. This section includes important and new initiatives implemented to better achieve our strategic goal.

Strategy: Increase student financial support

A major push to receive new funding for support of graduate education was reflected in a multiyear effort that started in FY 2012. In FY 2013 we received a total of $3 million in one-time funding to enhance graduate programs. Over two years, these funds were used for infrstructure, recruitment and graduate student support. In FY 2014 the state legislature moved to support graduate programs with $500K in recurring funding and $500K in one-time funds. The recurring funding has been committed primarily to the support of faculty proposed graduate assistantships.Those dollars are being used to support competitively awarded assistantships, additional Presidential Doctoral Research Fellowships, X-STEM assistantships in the colleges of Business, Arts, and Humanities

Funding from the state legislature is aimed at increasing key metrics indicative of graduate student success, such as total enrolled graduate students, reduced time to degree, and total degrees conferred at USU.

Talin Louder (Pathokinesiology, EEJCEHS) and Stephanie Kung (Nutrition, Dietetics and Food Sciences, CAAS) were recruited to USU and are now supported by the Presidential Doctoral Research Fellows program.

and Social Sciences, and development matching dollars.

In FY15 the state legislature allocated $1.6 million in new recurring dollars to support graduate education at USU. Of this $1.6 million, $150K of reoccurring funding was allocated to the library and $725K was allocated to the Provost for use in support of critical faculty hires aimed at boosting graduate training in important fields and disciplines. The remaining $725K for FY 2016 is committed to a backlog of faculty requests for graduate student support. Commencing in FY 2017, the $725K of those funds that are targeted to direct graduate student funding will be allocated to colleges, using a formula based on the number of 0.5 FTE assistantships in each college funds will be distributed.

Strategy: Enhance recruitment efforts

Graduate recruitment workshop
A Training for Research Faculty event (held in September) focused on tactics for recruiting exceptional graduate students. About 60 faculty members attended a 90-minute session, which focused on optimizing recruitment audiences, messages and communication channels. The workshop received 100% positive feedback, with requests for more in-depth follow-up discussions.

PDRF recruiting
The Presidential Doctoral Research Fellows program is administered by RGS and is designed to support exceptional graduate research and mentoring through recruitment, retention, and training of world-class doctoral students. Each awarded fellowship constitutes a commitment of resources and responsibilities from awarding (RGS, college/ department) and receiving (PDRF) parties. The PDRF program entered its fourth year of operation in FY 2015.

Before the FY 2015 recruiting season, there were 28 active PDRFs. In FY 2015, 14 additional fellowships were created. Fellowships are allocated to colleges based on proportion of PhD enrollment. Fellowship slots are awarded to departments or individual faculty members by each dean. In FY 2015, one "at-large" slot was allocated by RGS. A table of all the allocated slots is included on page 44.

Graduate admissions: Portfolio option

The Graduate Council approved a portfolio option for programs that would like to allow applicants to submit a portfolio in place of national entrance examination results. Consideration of this option was driven by the Department of Art and Design, which believes that a portfolio of work is a better predictor of success than a test score, and which has seen potential students turn to other schools that allow submission of a portfolio. Each graduate program that wants to use the portfolio option must submit to the Graduate Council a request that explains the type of portfolio that will be accepted, how it will be evaluated, and whether peer and aspirational peer programs follow a similar practice. At the end of the 2014-15 academic year, the Department of Art and Design and the Executive MBA Program were approved by the Council to accept a portfolio in place of an entrance exam score.

Western Regional Graduate Program (WRGP)

Two USU programs, American Studies, with a specialization in Folklore, and Management Information Systems joined the WRGP, and are now among the 15 graduate programs for which students from 15 western states and the Commonwealth of the Northern Mariana Islands can pay resident tuition as a result of a reciprocity agreement through the Western Interstate Commission for Higher Education.

Strategy: Improve departmental programs

Graduate faculty approval

Approval of individuals to serve on graduate supervisory committees now takes place at the department level, with final approval by the college dean. This process, which started in fall 2014, puts the decision about which roles an individual may be assigned (e.g., advisor, committee member, non-voting committee member) in the hands of the faculty with the most appropriate disciplinary expertise.

Graduate program mid-term reviews

The past year was the midpoint in the five-year plans for program improvement that were developed as part of a major review of each graduate program. Mid-term reviews conducted by the college deans evaluated progress that had been made towards goals established in those five-year plans. Graduate programs in each department were provided with data on applications, enrollment, degrees awarded, student demographics, and time to degree, and tasked with providing to their college deans a report on the status and trajectory of their program, and updates to their five-year goals. Those reports were reviewed by the Graduate Council and submitted to President Albrecht.

Strategy: Provide value-added opportunities

Graduate Training Series (GrTS)

Now in its second year, the Graduate Training Series provides monthly opportunities for graduate students to receive instruction on professional development skillsets. This year, the Graduate Training Series was all about "how to." Students from every college attended workshops on topics ranging from graduate school hacks to professionalism to visual communication skills.

Presenters from a variety of disciplines and offices on campus shared their expertise to enrich graduate students' learning beyond their classroom curricula and research. Average attendance at the workshops was about 50 and some even brought in 75. Students response was overwhelming positive to each of the workshops, a response gleaned from using the "Like or Dislike" box system, where students drop in a comment card in the box of their choice on their way out the door.

Comment highlights included:

- "Most helpful GrTS so far! Really, supremely practical advice that I plan to follow to the letter."
- "This was by far the most useful GrTS session I've been to. Thanks."
- "Great presentation and a wonderful presenter! Well done and felt that it was well worth my time."

2014-15 Graduate Student Training Series Workshops

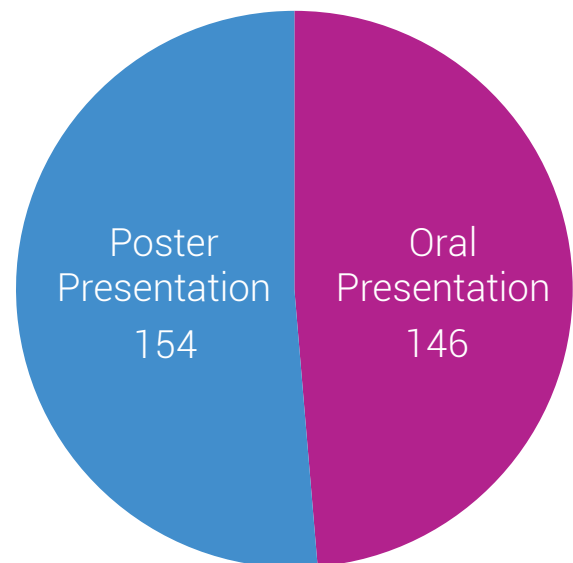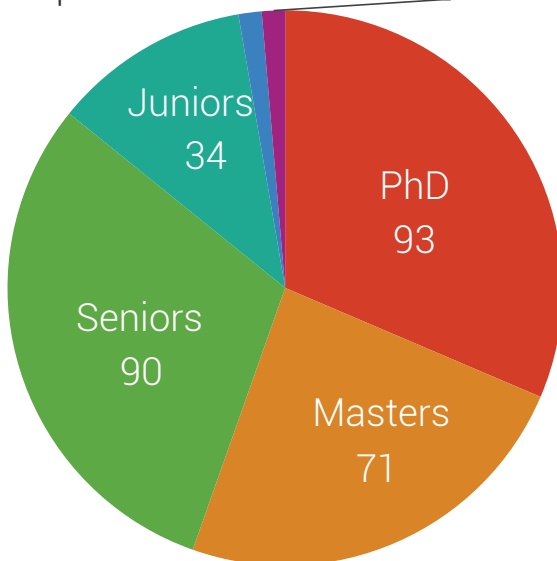| Workshop	Attendees
How To Hack Graduate School (From the People Who Run It)	25
How To Work With Your Mentor	60
How To Get the Most Out of a Conference	38
How To Protect Your Work	33
How To Create Gorgeous Slides	60
How to Design Stunning Posters	75

- "Fabulous once again! Thank you so much for your work, preparation, and especially the examples. I've never been interested in a poster session for the very reasons you mentioned (BORING!). Now I am ready and VERY interested. I want to engage in this way."
- "Fantastic! Most engaging presentation I've ever attended. Thank you!"
- "Great advice. Come teach the Physics professors, so they quit making me add more words!"

Student Research Symposium

This year, Research Week's two oldest and most attended events, Student Showcase and the Graduate Research Symposium, were merged into a single Student Research Symposium. By bringing undergraduate and graduate students to the same poster sessions and oral presentations, RGS was able to offer targeted training to student presenters, mentorship and networking opportunities, and, most importantly, discipline-specific sessions, which provided the opportunity to better support the students. The judging system was also streamlined, allowing faculty judges to provide online feedback that was

Student Research Symposium Participants

tallied in real-time and provided email feedback to students.

More than 300 graduate and undergraduate students, from all colleges, participated in the symposium and associated trainings. There were 154 posters and 146 oral presentations. Biological Engineering was the best-represented department at 29 participants, followed by Chemistry and Biochemistry at 24, English at 22 and Physics at 19.

More than 60 faculty members assisted with judging the posters and presentations, and, in addition to the traditional judging, students were also given critiques on their presentation skills by LPCS representatives and more than 80

students submitted their posters and slides for consideration for design judging.

Two other universities contacted our office to learn more about a project USU undergraduates were working on. They found out about the projects because the abstracts were posted online.

Graduate student travel awards
In FY 2015, a total of $51,800 was allocated to graduate students to support travel to professional conferences to present research.

Three colleges participated in a travel matching program to set up an additional pool of funds for their students to access once the central pool was exhausted. This college-specific funding
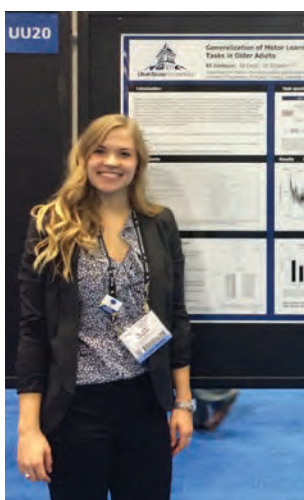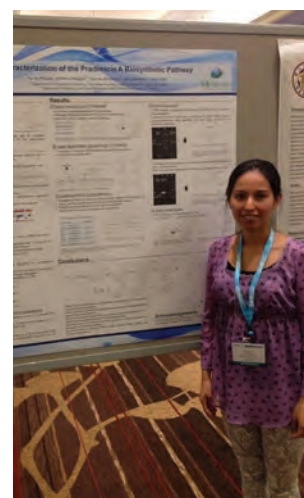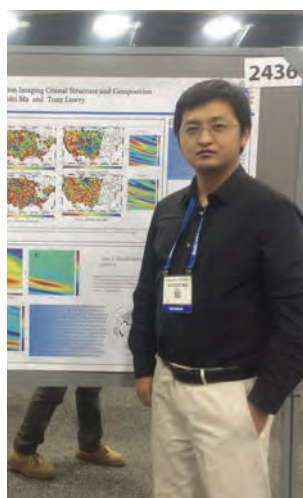
RGS funds supported travel for 176 graduate students to attend academic conferences and professional gatherings.

supported another $10,400 in travel funds for graduate students.

Strategy: Provide efficient graduate support services

Graduate orientation

In August 2014, RGS overhauled the new graduate student orientation. Held the Thursday before fall semester, the content of the hour-long orientation was restructured to include a broader overview of the graduate student experience, instead of a focus on rules and checklists for degree completion. To augment this, a graduate student fair was held outside the ESLC afterwards, hosting campus and community organizations for graduate students to become familiar with.

Additional new student materials were provided beyond the orientation event. A graduate student passport was developed, giving students direction toward the best first steps to integrate themselves with campus. A new student portal was also developed and launched on the School of Graduate Studies website.

Fall semester graduate student orientation has been retooled to give a better, broader overview of Utah State and involvement opportunities.

Initiatives to foster success of USU's graduate students

Strategies	Before 2013	2013-14	2014-15	2015-16
Increase student financial support.	Tuition awards, fellowships, scholarships			
			Research non-resident tuition waiver	
			Excellence non-resident tuition waiver	
	Manage subsidized insurance		(moved to Student Services)	
	Tuition award pool (decentralized, two-year allocation cycle)			
	Require tuition be included on grant proposals			
		PhD conversion		
		One-time state funding: PDRF expansion, dissertation enhancement		
			Recurring state funding: X-STEM, RGS assistantships	
Enhance recruitment efforts.	Recruitment grants	(augmented)		(augmented)
	Grad school recruiting email campaign			
	PDRF program, profiles, posters, recruiting			
	Western Regional Graduate Program			2 new degrees
	Recruiting fairs			
	Recruitment online toolkit, workshop, panels			
		Web enhancement		
		Iraq recruiting trip		
				CRM software
Improve departmental programs.	Program reviews (Self studies, 5-year plans)		(mid-term reviews)	
		Restructuring programs and degrees; conversion of MS/C to professional degrees		
		Graduate faculty process: department review		
Provide value-added opportunities.	Thesis and dissertation workshops			
	Graduate Research Symposium	(symposium training)	(combined with UG)	
	Responsible conduct of research training		(mandatory for doctoral)	
	Social media			
	Grant-writing workshops each semester			
	Travel funding moved to RGS			
	Ignite speaking event			
		Graduate Student Training Series (7 workshops/year)		
		Graduate student awards moved to RGS		
Provide efficient graduate support services.	Application processing			
	New student orientation		(grad orientation fair)	
	Graduate catalog		(RGS ownership)	(Acalog system)
	Commencement			
	Graduate program coordinator meetings			
		Graduate faculty forums		
		Enrollment management study		
		DocuSign		
		Data summaries: college/dept demographics		

Strategic Goal 3: Enhance USU's undergraduate research program

The undergraduate research program includes numerous opt-in opportunities in which students from all colleges may participate. A more complete overview of initiatives supporting this strategic goal is included on page 27. This section highlights new initiatives established in FY 2015.

Strategy: Encourage greater participation in undergraduate research
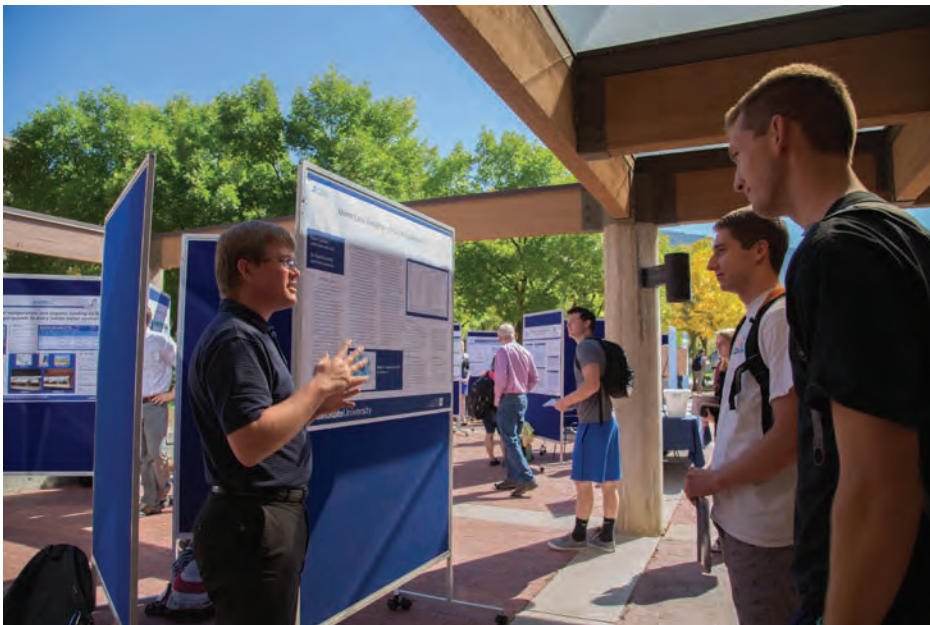
Summer Research Symposium

Students who conducted funded research during summer 2014 received the opportunity to present the results of their research at a new summer research symposium, held in September 2014. A poster-presentation training session, "Creating Great Undergraduate Research Posters," was held beforehand to support presentation skills for any undergraduates who were involved in research during the summer. SURCO-funded students shared their research posters in the courtyard outside the Natural Resources Building immediately after the fall Undergraduate Research Orientation meeting to enable new students to see examples of completed research projects.

The Erevna Quartet: USU's 2014-2015 Undergraduate Research Quartet

This year, the Undergraduate Research Fellows program was augmented with a new Undergraduate Research Quartet. The members of the quartet—Amanda Marsha, violin; Brynn Seegmiller, violin; Gavon Peck, viola; and Stephen Mitton, cello—were hand selected. As a quartet, their hours of rehearsal and preparation were equivalent to the hours of research conducted by other Undergraduate Research Fellows.

Quartet members received coaching from professional chamber musicians, gave outreach concerts and master classes at public high schools and after-school programs and gave performances across campus. All of these have allowed them to demonstrate the relevance of their art form in the community while preparing for a full-length chamber music recital. Each semester, the quartet gave a presentation to the Creative Arts class in the Kent Concert Hall for

The Summer Research Symposium was held after the fall undergraduate research orientation to give summer-funded students the opportunity to present their projects to interested students.

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Major changes were made in Scholars' Day, USU's key recruiting effort for high-ability students who feed into the URF program. Event program was imported from Research Week to provide an Ignite experience, and students were able to visit groups on and off campus.

several hundred students. They also organized a series of "dorm concerts" where they gave presentations in on-campus housing.

Strategy: Encourage recruitment of high achieving students

Scholars' Day

This year, Scholars' Day shifted to a recruiting event for high ability high school students. Organized in partnership with the Honors Program and the Admissions Office, Scholars' Day has been a component of the main USU yield event, A-Day. Although successful, the date of the event has given little opportunity to provide true recruiting opportunities, since it is held after all scholarship and fellowship deadlines.

RGS moved Scholar's Day from March to May, and targeted high school juniors, instead of high school seniors. Nearly 200 students from across Utah and Idaho attended, and most provided very positive feedback on their experience. They

saw Ignite talks, a TEDx talk, completed an interactive build event (while USU representatives talked about honors, undergraduate research, and academic scholarships with their parents), took a campus tour, had lunch, and ended the day at an "exploration" session. In those sessions RGS partnered with groups on and off campus: the Utah Water Research Laboratory, the SMASH Lab, Space Dynamics Laboratory, the special collections division at the Merrill-Cazier Library, the Anthropology Museum, the Department of Psychology, ASSERT, the Department of Art and Design.

URF application with Honors

In conjunction with changes to Scholars' Day, the application process for Undergraduate Research Fellows was further streamlined reduce barriers to participation. Two years ago, the on-campus interviews were discontinued in favor of an all-online process. This year, the application was simplified by combining the main information submission and the essay with the Honors program application.

USU undergraduate researchers presented 24 posters to state legislators and others at the 13th annual Research on Capitol Hill held in partnership with the University of Utah.

Strategy: Provide funding opportunities for undergraduate research projects

Changes to URCO policies
The Undergraduate Research and Creative Opportunities (URCO) Grant program, funded by RGS, was established in 1975 to support worthy independent student projects. In the summer of 2013, the program was expanded to include the summer term and allow salary to be included in budgets. In the summer of 2014, the summer program was unified, and the URCO programs scope and budget were expanded.

In FY 2015, there were two rounds of URCO funding. In fall 2014, there were 33 URCO

proposals funded, in spring 2015, there were 36 URCO proposals funded, for a total of $72,545 in funding support.

Strategy: Recognize undergraduate research successes

Research on Capitol Hill
Utah Research on Capitol Hill, co-hosted by the University of Utah, was held on January 29, 2015. Thirty-two students presented 24 posters to Utah legislators.

UCUR
The Utah Conference on Undergraduate Research was hosted at Dixie State University on February

27, 2015. A total of 27 Utah State University students participated.

NCUR

RGS supported 31 students in attending the National Conference on Undergraduate Research in April. NCUR was hosted by Eastern Washington State University in 2015.

Strategy: Train students in research best practices

Student Research Symposium

As mentioned on page 19, FY 2015 brought a major change to Research Week: the Student Research Symposium. Created from the hybridization of Student Showcase with Graduate Research Symposium, the new Student Research Symposium is a forum for presenting and celebrating all levels of student research Utah

State. It began with three communication training events tailored specifically to research-focused students and concluded with the symposium itself, an opportunity for students present research both visually and orally in a professional setting.

There were several benefits of this change specifically for undergraduate students. By adding graduate students and undergraduate students to the same sessions, RGS was able to host discipline-specific sessions. This had a few consequences: (A) the sessions were more "conference like" and a better proxy for real-experience, and (B) it helped drive department faculty and students (and potential students!) to the sessions, as they were able to see "their students" in more focused sessions. There were also good pedagogical reasons for merging as the "near-peer" literature: putting students next to more advanced peers, and supporting mentorship, is an important educational practice.

The 2015 Student Research Symposium attracted more than 300 student presenters and was aided by 60 faculty judges.

Initiatives to enhance USU's undergraduate research program

Strategies	Before 2013	2013-14	2014-15	2015-16
Encourage greater participation in undergraduate research.	Undergraduate Research Advisory Board			
	Day on the Quad promotion			
	Social media (Facebook, Twitter, Instagram)			
	List serve		(migration to MailChimp)	
	Fall undergraduate research orientation		(summer research symposium)	
		Spring undergraduate research orientation		
			Erevna UR String Quartet	
				Update UR website
				Connections content
Encourage recruitment of high achieving students.	Undergraduate Research Fellows program communication			
	Coordination with Honors			
	Scholars' Experience recruiting event		(May event)	
		Overhaul URF application process	(Combine process with Honors)	
Provide funding opportunities for undergraduate research projects.	URCO grants			
	Undergraduate Research Fellow program			
	Travel Funding (UCUR, NCUR, POTH, ROCH)			
	SURCO program for summer research			
			Changes to URCO policies	
			Combine URCO with SURCO	
				UR Travel Award
Recognize undergraduate research successes.	Undergraduate Research			
	Research on Capitol Hill		+U/U partnership	
	UR transcript designation			
	Undergraduate research awards			
	Research Fellow activities			
	Faculty mentor reception			
Train students in research best practices.	Student Showcase		(Student Research Symposium)	
			SRS badging, training, feedback, partnerships	
	UCUR	(hosted 2013)		
	National events: NCUR/POTH			
	"Perfect Year of UR" brochure			
	URF guidebook	(UR guidebook)		
	Student Showcase training			
	Ignite speaking event			
			URCO training	
				URF boot camp

Chapter 2:
Research Council and Graduate Council

Research Council activities

The Research Council provides advice and recommendations to the Vice President for Research and Dean of the School of Graduate Studies. Additionally, members of the council provide direct and important channels of communication between researchers and those who make decisions affecting research at USU.

Research Council FY 2015 Roster

Representative	College
Mark McLellan	Chair, Vice President for Research and Dean of Graduate Studies
Noelle Cockett	Provost
Craig Jessop	Dean, Caine College of the Arts
Ken White	Dean, College of Agriculture and Applied Sciences
Christine Hailey	Dean, College of Engineering
John Allen	Dean, College of Humanities and Social Sciences
Lisa Berreau	Interim Dean, College of Science
Beth Foley	Dean, Emma Eccles Jones College of Education and Human Services
Doug Anderson	Dean, Jon M. Huntsman School of Business
Chris Luecke	Dean, S.J. and Jessie E. Quinney College of Natural Resources
Bradford Cole	Dean, Libraries
Bryce Fifield	Director, Center for Persons with Disabilities
Nancy Huntly	Director, Ecology Center
Mac McKee	Director, Utah Water Research Laboratory
Ryan Moeller	Faculty Senate Representative

Actions of Research Council in FY 2015

November 13, 2014 --
Research Council approved with a majority vote proposed revisions to USU's Extra Service Compensation Policy #376.The procedure advanced through all administrative steps as was presented and approved at the March 6, 2015 USU Board of Trustees meeting. The full text of the policy is included here. The link to ESC procedures is https://hr.usu.edu/files/forms/ESC-PR.pdf, and the ESC form is https://hr.usu.edu/files/forms/ESC_Form.pdf .

USU Policy Manual: Compensation #376 - Extra Service Compensation

Covered Employees: Benefit-Eligible, Exempt Employees

Date of Origin: January 24, 1997

Effective Date of Last Revision: March 6, 2015

Federal Guidance References

The following policy is based on the following:

- Utah Code 67-16-1 et.seq., "Utah Public Officers and Employees' Ethics Act.

- Federal Office of Management and Budget, Final Rule -- Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (A-81) – Federal Register, Vol 78, No. 248

  - (Superseding: OMB Circulars A-21, A-87, A-110, and A-122 (which have been placed in OMB guidance); Circulars A-89, A-102, and A-133; and the guidance in Circular A-50

  - Implementation Date: December 26, 2014

- NSF, Office of Inspector General – 2004 Audit findings

- Department of Justice, settlement findings – 2008

- HHS Office of Inspector General – 2011 Audit findings

376.1 Introduction

The University recognizes that employees may make unusual contributions to the University that are both related and unrelated to their Primary Work Assignments. This policy is designed to establish an institutional expression of support for appropriate, operations-based standards for Extra-Service Compensation.

376.2 Definitions

2.1 Primary Work Assignment

The Primary Work Assignment, defined is the basis upon which the University sets its expectations of an employee's duties and allocation of effort. USU utilizes the following methods to establish the Primary Work Assignment:

(a) For Faculty: The primary work assignment is derived from the Role Statement, as defined in under section 6.1 and 11.1 of USU Policy #405, Tenured and Term Appointments: Evaluation, Promotion and Retention.

(b) For Non-Faculty Exempt Employees: The primary work assignment is derived from the Office of Human Resources most recent position description available for that employee, which documents the responsibilities, functions, and requirements of each job. Expectations for the allocation of effort are also reflected in USU's annual Budget Process/Salary Planner process.

2.2 Full Workload

Full Workload for an employee shall be that workload for which an employee is compensated by the University, exclusive of compensation for incidental work. For exempt employees, it shall be that workload specified in the primary work assignment for a given period. The more closely an activity is associated with the University's compensation and reward systems, the more likely it will be included in the Full Workload.

2.3 Institutional Base Salary

Institutional Base Salary (IBS) shall be the salary paid by the institution for the performance of the full workload by a given employee. It may be based on appointments of differing lengths, such as the academic year, eleven months or twelve

months. IBS shall be calculated in accordance with Budget Office Guidelines, "Salary Definitions." The IBS may change based on significant, non-temporary changes in the Primary Work Assignment or because of salary increases approved by the University.

2.4 Institutional Base Salary Earning Rate

The Institutional Base Salary Earning Rate shall be calculated based on the compensation level at which an employee is paid for his/her appointment term, divided by the number of months of that term. An employee shall not earn compensation from USU sources in excess of the base salary rate in any given month, except as allowed under this policy, Extra Service Compensation or through a specially approved administration one-time payment.

2.5 Institutional Payout Rate

The Institutional Base Salary Earning Rate may differ from the amount of compensation actually paid to an employee during a given month, because salary for an appointment of less than 12 months is distributed across 12 months in the payroll system. For details concerning distribution of pay over a period different from the appointment term, contact the Controller's Office.

2.6 Incidental Work

Incidental Work is that work which is accomplished by an individual in excess of his/her Full Workload, as follows:

2.6.1 Incidental Work that is carried out within the institution and paid for as Extra-Service Compensation must be documented in the University's financial management systems, though it shall not be reported or certified in the University's time and effort reporting system.

2.6.2 Incidental Work that is provided without compensation shall be reported to the immediate supervisor in order to avoid conflicts of interest, including conflicts of commitment.

2.6.3 Incidental Work performed outside the university is neither reported in the time & effort or payroll systems, nor documented

in the University's financial management systems; however, documentation of consulting leave time is required as set forth in USU Policy #377, Consulting Services.

2.7 Extra Service Extra

Service shall be any service rendered to the University that is not specifically identified as part of the employee's Full Workload. Extra service shall be clearly identified and approved in advance as such in accordance with this policy and Policy 404.1.2(7), Faculty Appointments, Professional Services.

376.3 Policy

Opportunities for consulting or other activities that fall outside of an employee's Primary Work Assignment are granted in accordance with Utah Code 67-16-1 et. seq., "Utah Public Officers and Employees' Ethics Act," and as permitted under USU's consulting policy. Such activities shall be allowed at the University's discretion where clear benefit to the University can be demonstrated.

Employees may provide Extra Service to the University beyond their Primary Work Assignments either for or without compensation, provided that the preparation and performance of such services do not impede the discharge of their duties under their Primary Work Assignments.

Compensation received for Extra Service shall not exceed 20% of the individual's Institutional Base Salary without prior written approval of the Executive Vice President & Provost for academic units and without prior written approval of the Office of the President for all non-academic units.

3.1 Extra-Service Compensation Unrelated to the Primary Work Assignment

3.1.1 Extra Service Related to Sponsored Programs Sourced Funds.

Extra and supplemental compensation from federal funds is governed by OMB Circular A-21 (OMB Uniform Administrative Requirements), which also requires that like funding be treated consistently under like circumstances by the University. Thus,

all external funding shall be subject to the regulatory guidance in OMB Circular A-21 (OMB Uniform Administrative Requirements, Section 200.430(h)(3)), as follows: "intra-university consulting is assumed to be undertaken as a university obligation requiring no compensation in addition to full-time base salary. However, in unusual cases… charges for such work representing additional compensation above IBS are allowable…". This principle applies to employees who function as consultants for sponsored agreements conducted under the direction of other University employees.

Extra-Service Compensation from external funds can be allowed for faculty and other exempt employees when all of the following conditions are met:

(1) The request does not exceed the Base Salary Earnings Rate based on the employee's Institutional Base Salary, which is that compensation provided to an employee for fulfillment of his/her Full Workload;

(2) The employee will perform a role outside of the individual employee's organizational unit or is otherwise different from his/her Primary Work Assignment; NOTE: Employees may not receive compensation for Extra Service work on projects for which they serve as PI or Co-PI.

(3) Work is demonstrably in addition to the employee's Full Workload for the reporting period during which it will be performed;

(4) The request is specifically proposed and included in the approved budget and/or agreement with the sponsoring agency or otherwise approved in writing by an authorized agency representative. If not specifically and explicitly provided for in the approved proposal, budget and/or award, an official sponsor approval must be obtained before any extra contractual work is done. NOTE: By itself, agency approval for Extra Service payment

shall not be considered a waiver for requirements 1-3 above.

(5) The request is approved in advance by the Vice President for Research. Review and support will be required of the individual's department head, supervisor, dean and/or vice president as appropriate prior to submission to the Office of Research & Graduate Studies. Any request for above 20% will also require the follow-on approval of the Executive Vice President & Provost.

For additional forms and instructions concerning Extra-Service compensation involving external funds see RGS Procedure 376-PR.

3.1.2 Extra-Service Compensation from Non-Sponsored Programs Sourced Funds

USU's Disclosure Statement to the Federal Government (DS-2) requires the institution to use the same salary and wage distribution system for all like employees, regardless of the source of their compensation. Thus, the University uses consistent practices for identifying, charging and reporting all personnel costs, including its method of identifying which activities will be included in the Full Workload (and therefore the Institutional Base Salary) and which will not.

As a result, Extra Service Compensation from all non-sponsored programs sourced funds must meet all of the following restrictions:

(1) The Extra Service is compensated at a rate not to exceed the Institutional Base Salary Earnings Rate which, is based on the employee's Institutional Base Salary (the compensation Provided to an employee for the fulfillment of the employee's Full Workload);

(2) The work is outside of the scope of the employee's required job expectations, as set forth in the Primary Work Assignment;

(3) Work is demonstrably in addition to the employee's Full Workload for the reporting

period during which it will be performed;

(4) The Extra Service is based on temporary and unusual circumstances, and funds have been allocated to pay for the services.

(5) The request is approved in advance by the Executive Vice President & Provost. Review and support will be required of the individual's department head, supervisor, dean and/or vice president as appropriate prior to submission to the Office of the Executive Vice President & Provost.

For additional guidelines concerning Extra-Service compensation involving nonsponsored programs sourced funds see Provost Procedure 376-PR.

3.1.3 Extra Service Related to Primary Work Assignment

Only in the most unusual circumstances, outcomes and activities focused on furthering the institutional missions of discovery, learning and engagement, which are exclusively funded from unrestricted and non-sponsored programs sourced funds, which are also related to the Primary Work Assignment can qualify for Extra-Service compensation.

Extra Service compensation related to the Primary Work Assignment should not be used as a regular supplement to an individual's salary.

Requests for Extra-service Compensation related to the Primary Work Assignment may not exceed the Institutional Base Salary Earning Rate, and must be approved in advance by the Executive Vice President & Provost.

3.2 Relationship of Extra Service Compensation to Non-appointment Payments

USU allows faculty and other exempt employees with appointments of less than 12 months to receive compensation at their Institutional Base Salary Earning Rate for periods up to a total of 12 months per fiscal year based upon the conduct of research, teaching, or other activities that are consistent with federal and USU policy and that do not conflict with the faculty member's Primary Work Assignment. This compensation is not Extra Service.

Non-appointment compensation is subject to effort reporting and certification. Effort and compensation for such work should therefore occur in parallel with, or in replacement of the employee's Primary Work Assignment, and may be expended at any time during the fiscal year. Thus, employees working during periods not included in their academic appointments shall, when appropriate, utilize any non-appointment period available to them to reach this 12-month capacity for salary compensation before any Extra-Service Compensation will be approved.

USU does not limit an employee's opportunity to receive compensation paid directly by a non-University funding source as per USU's consulting policy.

376.4 Responsibility

4.1 Department Heads and Supervisors
In keeping with Federal expectations that USU will meet agency requirements for department heads, supervisors, vice presidents and deans are responsible for reviewing extra service opportunities with employees before they occur to ensure that interference or conflict with the employee's Primary Work Assignment is avoided or appropriately managed. The department head/supervisor and dean has primary responsibility for working with employees to ensure compliance with this Extra Service Compensation policy. Refer to RGS Procedure 376-PR and Provost Procedure 376-PR for guidance on implementing this policy. Departments and colleges will bear primary responsibility for repayment of disallowed Extra Service Compensation costs.

4.2 Employees
Employees are responsible for accurately completing the Request for Extra Service Compensation Form and for obtaining supervisory approvals prior to submission. Conflicts of interest must be disclosed as they arise.

Graduate Council activities

The Graduate Council advises the Vice President and Dean for Research and Graduate Studies, providing a forum for considering major graduate program and student issues, as well as approving changes in programs.

New degree programs

The Graduate Council approved proposals for new PhD programs in Aerospace Engineering (College of Engineering) and Neuroscience (College of Education and Human Services, but a strongly interdisciplinary program supported by faculty from the colleges of Education, Engineering, and Science).

The Council also approved the conversion of three specializations in the Applied Sciences Technology and Education MS degree into two separate MS degrees (Agricultural Extension and Education, Family and Consumer Sciences Education and Extension), and a new specialization within the Teacher Education and Leadership MEd program, Higher Education/ Student Affairs.

Discontinued degree programs

The Council approved discontinuation of one degree that has not been used for more than 5 years, the MA in Sociology.

Program modifications

With the four new degrees and discontinuation of one degree, USU now offers a total of 150 graduate degrees, including 28 professional degrees.

The Council approved a change in the name of an MBA specialization from Manufacturing Management to Shingo Operational Excellence. Credit hour reductions were approved for two PhD programs, Computer Science and Instructional Technology and Learning Sciences, from 90 to 70 credit hours.

Admission requirements

The Graduate Council approved a portfolio option for programs that would like to allow applicants to submit a portfolio in place of national entrance examination results. More explanation is included on page 17.

Graduate Council FY 2015 Roster

Representative	College
Mark McLellan	School of Graduate Studies
Christopher Terry	Caine College of the Arts
Abby Benninghoff	College of Agriculture and Applied Sciences
Nick Flann	College of Engineering
Michelle Baker	College of Science
Richard Krannich	College of Humanities and Social Sciences
Louis Nadelson	Emma Eccles Jones College of Education and Human Services
Konrad Lee	Jon M. Huntsman School of Business
Johan Du Toit	S.J. and Jessie E. Quinney College of Natural Resources
Charles Waugh	Faculty Senate
John Elsweiler	Library
Scott Bates	School of Graduate Studies
Jeff Broadbent	School of Graduate Studies
Richard Inouye	School of Graduate Studies
Steve Beck	School of Graduate Studies
Ryan Olsen	School of Graduate Studies
Derek Hastings	USUSA Graduate Senator
Ty Aller	ASUSU Director of Research
Tyler Broadbent	ASUSU Director of Graduate Campus Affairs

Chapter 3: *3*

By the numbers

Utah State University is Utah's land-grant and space grant institution. Its Carnegie classification is RU/H, a research university with high research activity. USU consists of the Logan Campus, a regional college (USU-Eastern) and three regional campuses (Brigham City, Tooele, Uintah Basin).
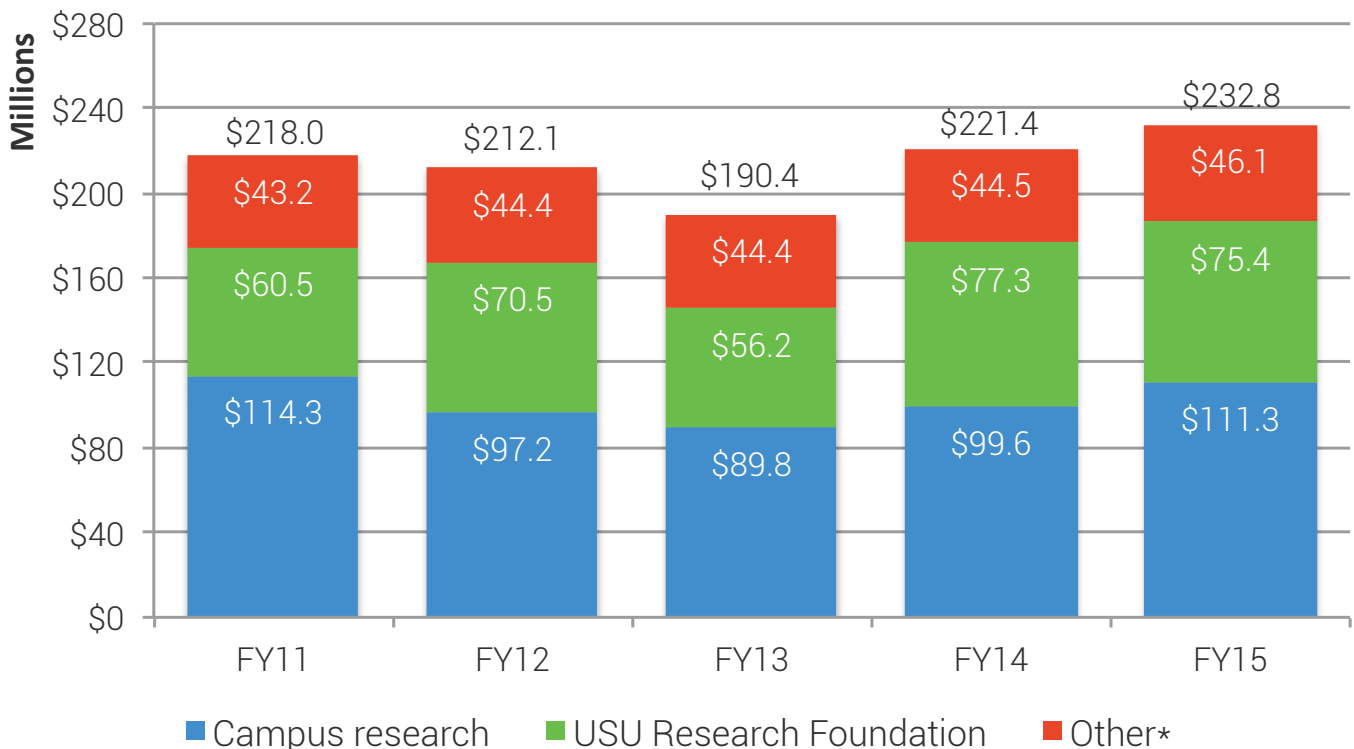
USU has eight academic colleges: Caine College of the Arts, College of Agriculture and Applied Sciences, Jon M. Huntsman School of Business, Emma Eccles Jones College of Education and Human Services, College of Engineering, College of Humanities and Social Sciences, S.J. and Jessie E. Quinney College of Natural Resources, and the College of Science. USU also has a highly productive Extension.

USU ranks second in the nation in aerospace and aeronautical research funding and third in the nation in external funding for a college of education. USU is the second-highest-ranked public university in the West and number four in the nation for lowest tuition in "America's Top Colleges" in *Forbes* magazine.

USU Profile

Faculty members	823
Total headcount enrollment (fall 2014)	27,662
Graduate degrees	150
Faculty who have worked with undergraduates on a research project in the past two years	63.5%
Total # USU sponsored awards (FY15)	1,418
Total USU awards (FY15)	$232.8 M
Total # USU proposals (FY15)	1,587
Total amount USU proposals (FY15)	$474.5 M

USU sponsored awards, FY 2011 - FY 2015

Stacked bar chart, Millions.

	FY11	FY12	FY13	FY14	FY15
Total	$218.0	$212.1	$190.4	$221.4	$232.8
Other*	$43.2	$44.4	$44.4	$44.5	$46.1
USU Research Foundation	$60.5	$70.5	$56.2	$77.3	$75.4
Campus research	$114.3	$97.2	$89.8	$99.6	$111.3

■ Campus research   ■ USU Research Foundation   ■ Other*

Includes financial aid, Pell grants, federal formula funds and gifts for research.

Sponsored Awards, FY 2011-FY 2015

	FY2011 Actual	FY2012 Actual	FY2013 Actual	FY2014 Actual	FY2015 Estimate	Change Over LY
USU Academic College						
Agriculture	18,629,285	21,310,465	13,424,828	19,026,344	19,133,660	0.56%
Arts	39,500	177,435	15,200	31,700	186,000	486.75%
Business	574,401	0	0	259,118	0	-100.00%
Education	40,210,629	27,660,152	24,027,748	27,187,813	40,039,343	47.27%
Engineering	7,881,429	12,531,895	15,325,971	11,242,253	11,743,417	4.46%
HaSS	333,168	2,044,239	1,376,804	839,613	1,843,958	119.62%
Natural Resources	9,931,834	8,666,404	13,443,810	9,855,978	7,669,091	-22.19%
Science	13,077,405	10,033,608	6,536,977	14,920,377	9,764,040	-34.56%
Other						
Extension	4,526,955	3,607,274	4,151,793	4,428,828	13,147,436	196.86%
Student Services	1,781,166	1,788,363	1,758,461	2,466,561	2,298,686	-6.81%
USU Eastern Campus	2,964,234	3,926,552	2,660,336	2,952,436	2,938,077	-0.49%
Miscellaneous[1]	14,350,838	5,417,693	7,071,205	6,415,716	2,507,265	-60.92%
Campus Sponsored Programs Subtotal	**114,300,845**	**97,164,079**	**89,793,133**	**99,626,736**	**111,270,972**	**11.69%**
USURF	60,520,260	70,543,805	56,228,730	77,297,145[2]	75,352,922	-1.90%
Financial Aid, Pell Grants[4]	38,214,960	39,525,494	39,963,223	39,484,606	40,782,241	3.29%
Federal Formula Funds	4,874,019	4,844,298	4,432,614	4,879,946	4,840,428	-0.81%
Gifts for Research	90,172	54,304	20,125	127,100	521,459	310.27%
USU Grand Total	**$ 218,000,256**	**$ 212,131,981**	**$ 190,437,825**	**$ 221,415,533**	**$ 232,768,022**	**5.13%**

1. "Miscellaneous" is a catchall category, with the Provost's Office, Administrative Services, and Regional Campus and Distance Education accounting for the majority of these revenues.
2. AWS awards for FY14 in the amount of $488,684 have been included with USURF totals
3. AWS awards were not included when calculating the percentage of change over the previous year.
4. Financial Aid, primarily Pell grant revenues, are anticipated to gradually increase in future years.

Research Expenditures, FY 2011-FY 2015

	FY2011 Actual	FY2012 Actual	FY2013 Actual	FY2014 Actual	FY2015 Estimate	Change Over LY
Research Expenditures	174,167,000	157,355,000	158,352,000	164,892,000	165,652,000	0.46%
Tuition Expenditures[1]	-	-	-	4,132,075	5,503,667	33.19%
USU Grand Total	**$ 174,167,000**	**$ 157,355,000**	**$ 158,352,000**	**$ 169,024,075**	**$ 171,155,667**	**1.26%**

1. Tuition Expenditures are tuition remissions provided to graduate students working on research. This information is not available for FY11 - FY13

Research awards by source, FY 2015

Source	Amount
State of Utah	$42.0 M
Department of Defense	$35.4 M
Private	$29.6 M
Federal government - other	$27.0 M
National Science Foundation	$11.5 M
Other states	$11.1 M
Dept. of Health and Human Services	$10.8 M
Department of Agriculture	$10.6 M
Department of Education	$5.5 M
Local	$3.1 M
Total	**$186.6 M**
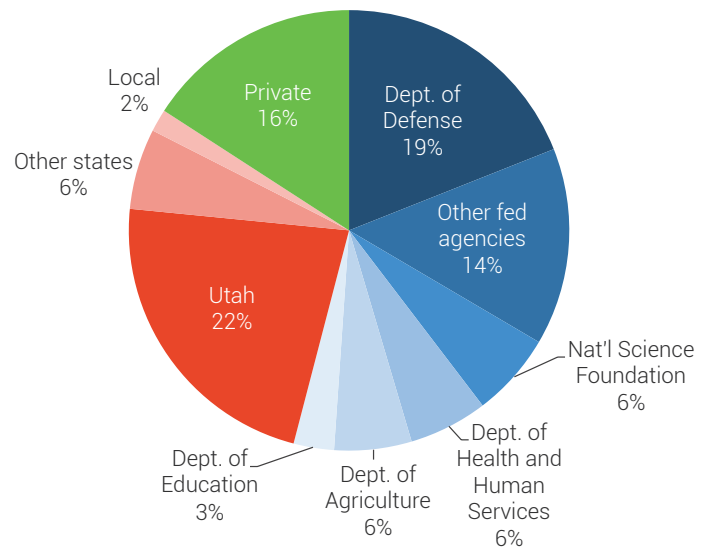
Notable new grants, FY 2015

This table represents just a few highlighted grants from the past fiscal year. They demonstrate cross-college collaborations, large contracts for new and established faculty, and projects that have significant real-world impacts.

PIs	Dept.	College	Project	Source	Amount
TC Shen David Britt Heng Ban John Shervais Astrid Jacobsen	MATH BE MAE GEOL PSC	Science Engineering Engineering Science Agriculture and Applied Sciences	MRI: Acquisition of a field-emission scanning microscope	National Science Foundation	$529,387
John Copenhaver	CPD	Education and Human Services	South Dakota Technical Assistance, Dispute Resolution Consortium, and Data Project.	South Dakota Department of Education	$1,143,200
Ming Li	CS	Engineering	CAREER: Toward Cooperative Interference Mitigation for Heterogeneous Multi-Hop MIMO Wireless Networks	National Science Foundation	$195.035
Clay Isom Kenneth White Abby Benninghoff John Stevens	ADVS MATH	Agriculture and Applied Sciences Science	Genome reprogramming and embryo surivabilityin porcine somatic cell nuclear transfer	Department of Agriculture	$499,290

Comparative metrics

	FY13 total research expenditures	FY13 research expenditures rank	FY15 National Academy members
Colorado State University	$313.2 M	47	8
Kansas State University	$183.1 M	74	0
Montana State University	$113.1 M	99	0
New Mexico State University	$142.4 M	88	0
Oregon State University	$23.3 M	61	5
University of Nebraska - Lincoln	$266.4 M	52	3
University of Nevada - Reno	$89.8 M	111	1
University of Wyoming	$65.5 M	127	2
Washington State University	$341.1 M	43	7
Utah State University	$158.4. M	81	0

Performance metrics

Research

	2011	2012	2013	2014
Total new awards [1,2]	$218.0 M	$212.1 M	$190.4 M	$221.4 M
National rank of research expenditures (of 643 institutions) [1,4]	110	119	118	NYA
New sponsored programs proposals submitted [1,2]	1,038	1,059	951	1,028
Peer-reviewed refereed journal publications [3,5]	953	999	962	1,000
Books [3,5]	44	40	42	31
Public exhibitions and public performances [3,5]	105	72	58	41

[1] Fiscal year
[2] Source: USU Sponsored Programs
[3] Calendar year
[4] Source: National Science Foundation
[5] Source: Digital Measures

FY12 faculty awards	FY13 doctorate degrees awarded	FY13 total number of faculty	FY13 total tenured faculty	Carnegie classification
5	370	996	743	RU/VH
2	263	790	567	RU/H
2	49	466	323	RU/VH
5	132	577	405	RU/H
15	353	615	375	RU/VH
6	464	1,036	767	RU/VH
4	179	551	402	RU/H
3	199	601	424	RU/H
9	457	874	657	RU/VH
2	109	702	479	RU/H

Graduate Studies

	AY11-12	AY12-13	AY13-14	AY14-15
Fall (day 15) enrollment of degree-seeking graduate students	2,674	2,593	2,527	2,528
Percentage of student body that is graduate students [1]	11.2%	10.9%	10.8%	10.7%
Doctoral degrees awarded	99	109	115	108
Master's degrees awarded	990	895	927	900

[1] Based on degree seeking students, both graduate and undergraduate

Graduate and Undergraduate Research

	FY11	FY12	FY13	FY14
Peer-reviewed publications with graduate student authors [1]	274	347	339	357
Peer-reviewed publications with undergraduate authors [1]	42	45	38	53

[1] Source: Digital Measures

RGS program reports and metrics

New Faculty Startup Commitments

USU Academic College	4-Year Total	4-Year Average		FY2012	FY2013	FY2014	FY2015
Agriculture	$ 434,776	$ 44,389	Yearly total	$ 53,214	$ 72,600	$ 149,628	$ 159,334
			Yearly average	$ 26,607	$ 36,300	$ 74,814	$ 39,834
Arts	$ 29,347	$ 7,244	Yearly total	$ 16,129	$ 3,066	$ 10,152	$ -
			Yearly average	$ 16,129	$ 3,066	$ 2,538	$ -
Business	$ 3,908	$ 977	Yearly total	$ -	$ -	$ 1,954	$ 1,954
			Yearly average	$ -	$ -	$ 1,954	$ 1,954
Education	$ 1,259,695	$ 40,250	Yearly total	$ 176,483	$ 759,135	$ 84,571	$ 239,505
			Yearly average	$ 16,044	$ 75,914	$ 21,143	$ 47,901
Engineering	$ 2,441,233	$ 94,132	Yearly total	$ 174,424	$ 309,133	$ 1,544,389	$ 413,287
			Yearly average	$ 58,141	$ 61,827	$ 118,799	$ 137,762
HaSS	$ 362,958	$ 10,333	Yearly total	$ 18,602	$ 82,347	$ 213,026	$ 48,983
			Yearly average	$ 4,651	$ 9,150	$ 19,366	$ 8,164
Natural Resources	$ 746,795	$ 75,762	Yearly total	$ 60,000	$ 40,000	$ 165,400	$ 481,395
			Yearly average	$ 60,000	$ 40,000	$ 82,700	$ 120,349
Science	$ 2,331,204	$ 107,684	Yearly total	$ 798,043	$ 436,561	$ 923,599	$ 173,000
			Yearly average	$ 79,804	$ 62,366	$ 230,900	$ 57,667
Utah State University	$ 7,609,916	$ 47,596	**Yearly total**	$ 1,296,896	$ 1,702,843	$ 3,092,719	$ 1,517,459
			Avg commitment/total startups	$39,300 / 33	$47,301 / 36	$75,432 /41	$58,364 / 26

Yearly totals are calculated based on full new faculty startup amount; this does not mean that they are paid out in full that same year. Some new faculty startups are paid over multiple years.
Averages are based on total new faculty startup amount.

Grant Experience for Mentorship (GEM) grants

PI	Dept.	College	Project	Co-PIs	Amount
Kathleen Oertie	SPER	Education and Human Services	Measuring Transition Collaboration: A GEM Project Targeted for the NIDRR Field Initiated Development Grant Competition	Caren Sax/San Diego State University	$9,996
Sarah Urquhart	ART	Arts	Design Thining + STEM: Assessing STEM Learning Outcomes in Client-Based Learning Environments	David Feldon	$5,000

Seed Program to Advance Research Collaborations (SPARC) grant

PIs	Dept.	College	Project	Co-PIs	Amount
Dale Wagner	HPER	Education and Human Services	Effects of PM2.5 Air Polution on Aerobic Exercise Performance	Roger Coulombe Michael Lefevre	$34,928

Research Catalyst (RC) grants

PIs	Dept.	College	Project	Co-PIs	Amount
Abby Benninghoff	ADVS	Agriculture and Applied Sciences	Role of MicroRNAin Genome Reprogramming in Bovine Somatic Cell Nuclear Transfer Embryos		$19,906
Carrie Durward	Ext/ NDFS	Agriculture and Applied Sciences	Increasing Fruit and Vegetable Consumption in SNAP Recipients: Effect of Food Sense Education Combined with Pricing Incentives	Heidie LeBlanc Heidi Wengreen Mateja Savoie	$19,996
Jennifer MacAdam	PSC	Agriculture and Applied Sciences	Reducing Ruminant Methane Emisions by Grazing Perennial Legume Pastures		$19,862
Jeffrey Mason	ADVS	Agriculture and Applied Sciences	The Effect of Ovarian Transplantation on Osteoarthritic Changes in Postreproductive Females	Arnaud Van Wettere Edward W. Hsu	$19,999
Silvana Martini	NDFS	Agriculture and Applied Sciences	Acoustic Cavitation in Edible Oils: Quantification and Modeling of Bubble Dynamics		$19,548

PIs	Dept.	College	Project	Co-PIs	Amount
Robert Ward	NDFS	Agriculture and Applied Sciences	Interaction Between Polyunsaturated Fatty Acids and Cooking on the Formation of Glycotoxins and the Development of Insulin Resistance and Fatty Liver in Mice Fed a Western Diet	Korry Hintze Tao Xu (grad student)	$20,000
Stephanie Borrie	COMD	Education and Human Services	Entrainment in the Context of Disordered Speech: An Exploration of Entrainment Analysis and Conversational Success in Interactions Involving People with Dysarthria		$20,000
Michael Levin	PSYCH	Education and Human Services	Developing an Acceptance and Commitment Therapy-Based Adjunctive Mobile App to Improve Mental Health Care	Thomas A. Jacobs	$19,766
Anthony Castronova	CEE	Engineering	A Real-Time Environmental Observation Processing and Decision-Making Framework		$19,992
R. Ryan Dupont	UWRL/CEE	Engineering	Citric Acid Induced Pjytoextraction by Three Plant Species in a Stormwater Bioretention Field Site	Joan E. McLean M. Borecki	$20,000
Ning Fang	CEE	Engineering	Integrating 3-D Interactive Tangible Models with Virtual Models to Improve K-12 Students' Spatial Abilities in STEM Education		$20,000
Young Woo Kwon	CS	Engineering	Enhancing Distributed Programming Abstractions to Improve the Energy Efficiency of Mobile Applications		$20,000
Kyumin Lee	CS	Engineering	Recommender System for Identifying and Engaging Information Propagators on Online Social Networks		$20,000
Rajnikant Sharma	ECE	Engineering	Real-Time Cooperative Localization: Towards Realization of Unmanned Aerial Vehicle Swarms in GPS-denied Environments.		$19,809

| PIs	Dept.	College	Project	Co-PIs	Amount
Idalis Villanueva	EED	Engineering	Design Heuristics to Correlate Self-Efficacy and Transfer of Learning in Engineering	Suzanne Jones Sydney Schaefer	$19,999
Jixun Zhan	BE	Engineering	Identification and Reconstitution of the Leualacin Synthetase		$20,000
Peter Howe	ENVS	Natural Resources	Testing a High-Frequency Survey Tool to Model Risk Perceptions and Disaster Preparedness	Graduate Research Assistant (TBD)	$19,983
James Lutz	WILD	Natural Resources	Spatial and Climatic Correlates of Tree Mortality in Mixed-Conifer Forests		$19,999
Karin Kettering	WATS	Natural Resources	The Importance of Plant Genetic Diversity to Ecosystem Multi-Functionality in Ecological Restoration		$19,986
Christopher Monz	ENVS	Natural Resources	Building an Agent-Based Model of Visitor Use in Dispersed Recreation Settings		$19,995
Edwin Antony	CHEM	Science	Mechanism of Action of the Sen1 Helicase and its Role in Transcription Termination		$20,000
Carol Dehler	GEOL	Science	The mid-Neoproterozoic (ca. 750 Ms) Reord of Eukaryotes and Environmental Change: Exploring the Visingso Group of Southern Sweden	Susannah Porter (UCSB)	$19,989
Zachariah Gompert	BIOL	Science	The Genomic Basis of Adaptation and its Role in the Evolutionary Process	Karen M. Kapheim/ Bio Frank J. Messina/Bio	$19,994
Carol von Dohlen	BIOL	Science	Genome Evolution of Bacterial Symbionts in Adelgidae (Sternorrhyncha: Aphidoidea) and the Roles of Symbionts in Host-Plant Interactions	John P. McCutcheon (U. Montana) Kelli Hoover (Penn State U)	$20,000

RGS Capital Equipment Grants selected for funding in 2015

Department	Item	Match Request
Chem/Biochem & Biol	Mass Spectrometer	$28,741
Chem/Biochem	Liquid scintillation counter	$20,817
Phys & ECE	Optical microscope	$16,500
MAE	3D Electronics Printer	$4,500
WILD, ENVS	Isotopic water analyzer	$29,971
PSC	Gel imaging and documentation system with CCD camera	$6,000
ADVS	Real-time PCR system	$13,773
NDFS	Professional Rancimat	$11,000
ADVS	Illumina MiSeq DNA sequencer	$43,550
COMDDE, TEAL, Psych	Mobile Eye Tracking System	$11,390
COMDDE	Portable Real-Ear Hearing Aid Analyzer	$5,247
Music	Steinway Model B Grand Piano	$7,500
		$198,989

Presidential Doctoral Research Fellow allocations

Total PDRF expenditures, by RGS, in FY15 was $877,926. Open PDRF slots include 6 new fellowships that came available in FY 15 with additional funding.

College	Active fellows	Slots to recruit	Total PDRFs
College of Agriculture and Applied Sciences	3	2	5
Emma Eccles Jones College of Education and Human Services	5	6	11
College of Engineering	5	6	11
College of Humanities and Social Sciences	3	0	3
S.J. and Jessie E. Quinney College of Natural Resources	4	1	5
College of Science	5	6	11
RGS at-large	3	2	5
TOTAL	**28**	**23**	**51**
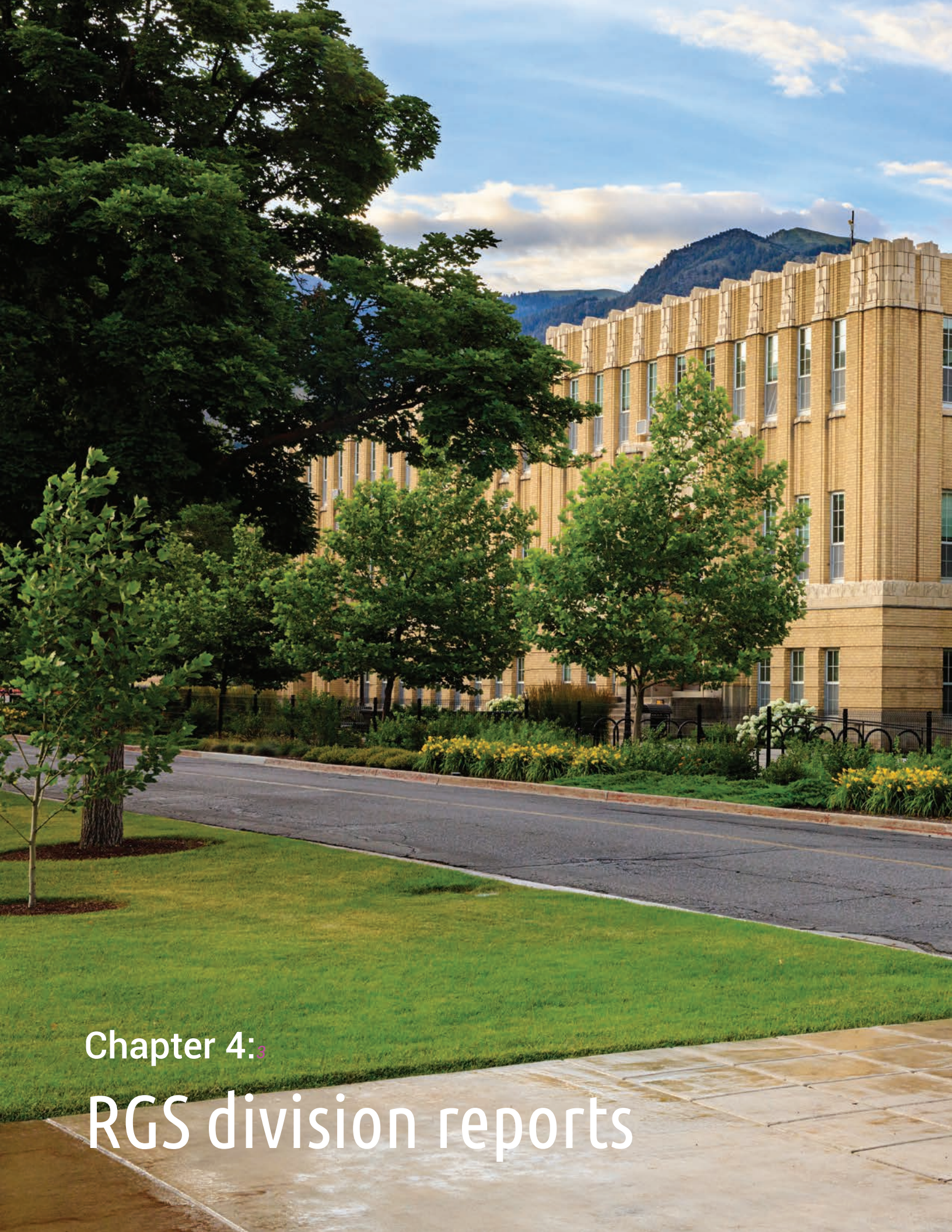
Chapter 4:
RGS division reports

Business Services

RGS's business services team has worked to provide support for RGS divisions and campus-wide activities. Support activities include training and outreach, extra service compensation form and procedures updates, and new faculty startup form updates.

Training and outreach

Training and outreach to review procedures, new policies, and updated forms includes one-on-one visits with individual employees, group meetings and training documentation. Trainings and outreach activities have been provided for personnel in the Colleges of Humanities and Social Sciences, Agriculture and Applied Sciences, Science, and Emma Eccles Jones College of Education and Human Services.

Additional meetings have occurred with individual departments and units for specialized topic review; meeting with the Center for Persons with Disabilities interim leadership team is one example of this.

New faculty start-up forms

New faculty start-up forms have been updated with a new funding model and additional training requirements of new faculty hires receiving start-up funds. The new funding model has a three-year installment of funds from RGS. New faculty receiving these funds are also required to attend the "Write Winning Grant Proposals" seminar and complete Research Financial Administration Series Training (RFAST) within the first year of hiring.

Environmental Health and Safety

Biosafety, industrial hygiene, occupational safety

Select agent program renewal
USU underwent an intensive review of the select agent program. Two USDA inspectors and two CDC inspectors conducted the review. The program review lasted four days and included select agent facilities, review of all select agent documentation and interviews with select agent personnel. A three-year renewal was granted in July 2014 and is current through June 2017.

Successful LARC and USTAR select agent lab shutdowns
The USTAR building was shut down in October 2014 and the LARC was shut down in May 2015. The shutdown included conducting refresher training for all select agent personnel, planning specific exercises, certifying all equipment

and HEPA filters, and maintaining all building mechanical, plumbing and electrical systems.

Each lab was certified by World BioHazTec. This certification included HVAC system failure testing, which is required by the select agent program.

Replacement of dedicated exhaust fans for biosafety cabinets at USTAR
The exhaust fans that service the biological safety cabinets in rooms 319 and 320 were replaced with a new heavier/stronger class II fan. The fan replacement was needed because the original class I fans kept burning out bearings due to high vibration in the fan.

The original class I belt-drive fans were replaced by a class I direct-drive fan. Once installed, the fan vibration was not improved. It was determined that a class I fan was not strong enough to pull the required static pressure through the ducting.

The class II fans were specified, ordered and installed. This has corrected the vibration problem.

Biosafety level 2 & 3 oversight

EHS conducted inspections of BSL-2 & 3 labs and provided BSL 2 and 3 blood borne pathogens training for approximately 250 faculty, staff and students.

Asbestos and hazardous material projects

Building renovations and demolitions require identification and removal of hazardous materials.

EHS has been involved in approximately 60 hazardous material projects of varying sizes involving Facilities, Housing and USU Eastern in the last 12 months. This averages one project every 6 days. The material must be identified, the project bid on and the removal overseen.

Ongoing occupational safety oversight for Facilities, Housing, Food Services, Regional Campuses

There was continued oversight and training for OHSA-required occupational safety programs. Training was conducted in forklift operation, LOTO, confined space, and electrical safety.

Radiation safety

A shipment of 1,300 pounds of radiological waste was prepared and shipped for disposal. There was continued application of the radioactive waste volume reduction plan, which resulted in cost savings, by reducing the amount of waste shipped off-site for disposal by 247 pounds.

Environmental management

Hazardous waste received
- 3,378 pick-ups (92,263 pounds)

Hazardous waste shipped out
- 72 pallets of e-scrap shipped (23,948 pounds)
- 423 drums of hazardous waste

Laboratory clean outs
- CEU (Chemistry, Biology, Geology, and Heavy Equipment Shop)
- Art Barn
- SANT 304

- Expired ether removal from VSB 319 lab clean-out
- Expired diethyl ether at the Uintah Basin Campus
- Successful regulatory inspections by DAQ and DEQ

Air quality reporting
- Completion of the yearly climate commitment greenhouse gas inventory
- Completion and submission of the priority pollutant yearly air emission numbers

Phase I environmental assessment
- Darwin Avenue Apartments Phase I
- Darwin Avenue Apartments Phase II

Campus services
- Construction of silver recovery unit for Fine Arts photography studio

GIS/IT/emergency management

- Created 203 pre-incident plans for the USU Fire Department
- Created 351 specialty maps/drawings
- Created 6 evacuation maps
- Created 45 asbestos abatement drawings

Chemical hygiene and training

EHS personnel provided safety training for 1,237 people in 29 safety training course offerings.

The following tools and information were added to the EHS webpage:

- A Qualtrics survey was developed to help personnel determine which trainings are required, based on job function.
- A printable .pdf version of the Training Matrix was developed.
- PI's are now able to access EHS training records on-line via the EHS Assistant Database.
- Information related to the implementation of the Globally Harmonized System of Hazardous Chemical Classification and Labeling (GHS) system was developed and

posted on the website. This information includes new pictogram descriptions, hazard classification definitions, new label requirements, information about safety data sheets, etc.

EHS personnel conducted laboratory inspections of College of Engineering teaching lab locations in anticipation of and as part of the preparation for the ABET accreditation process. Lab inspections were conducted for the Utah Veterinary Diagnostic Lab in anticipation of their re-accreditation process. EHS personnel assisted the Department of Art and Design with compiling responses related to the NASAD accreditation process.

EHS personnel were involved in responding to numerous indoor air quality (IAQ) concerns throughout the campus community. Most issues were identified and dealt with at the time of the call. A few of the issues were not immediately obvious, and a more intensive investigation was

conducted. Ongoing smell complaint issues in the VSB and AGRS buildings were resolved.

Annual fume hood function tests were conducted for the 400 fume hoods utilized across campus.

Laboratory inspections have been completed in Widtsoe Hall, Maeser Lab, and the Geology, Agricultural Sciences (AGRS), Veterinary Science and Bacteriology (VSB), and Laboratory Animal Research Center (LARC) buildings

Air monitoring was conducted in the Department of Art and Design photography dark room. The purpose of the sampling was to identify activities that could present an exposure hazard for student participation in classes in these facilities. The sampling was the first step in identifying activities that could be made less hazardous with the implementation/installation of ventilation controls.

Institutional Review Board

The 2014-2015 academic year was a landmark year for the Institutional Review Board. The USU IRB said farewell to its longtime administrator, True Rubal, who retired after more than twenty years of service to researchers on USU's campus. Following her retirement, Nancy Sassano and Janet Roberts moved to full-time positions in Proposal Development for the Emma Eccles Jones College of Education and Human Services.

In February of 2015, Nicole Vouvalis took over as director of the USU IRB. She comes to the IRB with a background in law and diversity work, and has been with Utah State University for three years. Maggie Duersch, who graduated from USU last spring with a degree in Psychology, was recently hired as the IRB assistant. A new IRB coordinator will be joining the office this fall.

Over the course of the last year, new research applications (protocols) have increased approximately 10% (336 total), following an 8% increase from the year prior. Continuation reviews and amendments remain fairly stable; the IRB

processes approximately 12-15 continuations and 15-20 amendments each month. While the full board typically reviews none or one protocol each year, it has reviewed five this last year alone, a number that is expected to increase, given the growing complexity of research being conducted by campus researchers.

In the year to come, the IRB looks forward to working more closely with researchers to introduce the new institutional conflict of interest policy. The policy, expected to come into effect spring of next year, will allow researchers to ensure that any financial conflicts of interest (held by the researcher, department, college, or institution) are identified, managed, and eliminated or minimized to ensure the integrity of human subjects research on Utah State University's campus.

During the 2015-2016 year, USU will also be working closely with the Association for the Accreditation of Human Research Protection Programs (AAHRPP) to renew its

accreditation. AAHRPP accreditation represents acknowledgement that the research infrastructure at USU provides strong and effective protections for human participants. This process requires a detailed self-assessment and in-depth site

visit, during which time site visitors will meet with RGS personnel, IRB members, and campus researchers. The IRB looks forward to successful completion of the reaccreditation process.

Integrity and Compliance

Export Controls

During FY 2015, the Departments of State and Commerce made changes under export control reforms. A major shift has been made of space-based technologies from the U.S. Munitions List, to the less restrictive Commerce Control

List, making it feasible for USU to perform more leading-edge research involving satellite systems and space weather sensing on its main campus. Export control systems and training have been developed and implemented to support this new work.

Laboratory Animal Research Center (LARC) and Institutional Animal Care and Use Committee (IACUC)

During the course of the previous year, the LARC has continued to see increased use, with a 13% increase in the average daily animal census, representing the third straight year in which the average animal census has increased. This increase in animal numbers has been primarily due to increased use of the animal facilities on the central campus. While the biocontainment facilities at the 650 Bioinnovations building represent a small component of the overall animal program, these areas showed a more than 100% increase in the average number of animals housed there, demonstrating the continued strength of infectious disease research at USU.

The LARC has been engaged in an ongoing effort to review and set animal care per diem rates. The LARC is required to set rates in accordance with federal guidelines to achieve cost recovery. This process involves cost and labor studies involving all members of the animal care team. We have also chosen to include faculty members in a per diem review committee to ensure that the LARC has input from its users. One significant goal of the current per diem review process is to make our methods for charging per diem consistent with

most institutions of higher education by shifting from charging on a per animal basis to charging on a per cage basis for most animal species. The shift in charge is pending approval from the Office of Naval Research, USU's cognizant federal audit agency. Upon the expected approval from the ONR, we will complete the per diem review process and implement new rates and charging methods.

In response to a news article alleging abuse and misuse of animals at a United States Department of Agriculture Agricultural Research Services (USDA-ARS) site in Nebraska, the USDA convened an Animal Health and Welfare Review Panel to review animal care and oversight process within ARS. Dr. Aaron Olsen, the LARC director, was invited to participate on and chair the review panel. In this position, Dr. Olsen had the opportunity to visit multiple ARS research sites and review the animal care and oversight programs at each location, and to ultimately provide a review of the animal care processes within ARS. This review included recommendations to the Secretary of Agriculture and USDA on how to improve animal

oversight processes throughout the ARS research system.

The IACUC has continued to serve the research community at USU by providing review and oversight of animal related research and teaching activities. The committee is currently experiencing change with the departure of some long-standing members and introduction of new members. In particular, we wish to note the departure of Mary Leavitt. She was a previous committee chair and has served continuously on the committee for 23 years. We are extremely grateful for her long and valuable service to the committee and the university.

Research Development

New Research Development division

The Proposal Development division was rebranded as the Research Development division in late FY 2015. This change better reflects the goals and services the division provides to faculty. More than just assisting with the development of proposals, division staff and the services offered help faculty craft their research programs to be more competitive and better positioned to garner external funding. The current efforts of the division will continue, with new staff and services coming in FY 2016.

Grantsmanship training program

Faculty
The grant-writing seminar tailored specifically to faculty and focused on "writing to the review process" was offered once in FY 2015:

- 1 seminar – fall semester
- 43 faculty and research support staff attended

Grant Writers' Seminars & Workshops (www. grantcentral.com) presented the seminar. RGS covered all seminar expenses for participants (including lunch and breaks).

Graduate students
Grant-writing seminars tailored specifically to the needs of graduate students were offered twice in FY 2015:

- 1 seminar – fall semester
- 1 seminar – spring semester

- 178 graduate students and/or postdocs attended

Grant Writers' Seminars & Workshops (www. grantcentral.com) presented both seminars. RGS covered all seminar expenses for participants (including lunch and breaks).

Proposal Writing Institute

The Proposal Writing Institute completed training its seventh cohort in FY 2015. Thirteen faculty members were selected via a competitive application process to participate in this four-week, intensive proposal writing training opportunity.

Including this most recent cohort, the Proposal Writing Institute has trained 86 faculty over the years. Those faculty members have submitted 96 proposals worth $57 million that can be tied directly to the proposals worked on during the institute. Of those submitted proposals, institute faculty have received 13 awards worth $6 million.

Funding Finder

The decision was made in FY 2015 to make theFunding Finder database the primary USU-provided source for faculty to find funding opportunities. All faculty are encouraged to sign up for the weekly Funding Finder Newsletter, which can be done by visiting the main page (https://fundingfinder.usu.edu/) and clicking the "Sign Up" button on the right side. There are currently 443 newsletter subscribers (381 faculty, 42 staff, 20 graduate students).

RGS seed grant program

The Grant-writing Experience through Mentorship (GEM) program provides funding to enhance the professional development of new investigators through one-on-one research and grant-writing interactions with successful research mentors. The purpose of this program is to build USU's research capability and increase extramural funding for scholarly activities by enhancing the proposal development skills of newly hired USU researchers.

The Research Catalyst (RC) program provides funding to help applicants develop new initiatives or directions in their discipline that will lead to new externally funded grants. The purpose of this program is to build USU's research capability and increase external funding for scholarly activities from government agencies and private sources.

The Seed Program to Advance Research Collaborations (SPARC) program provides funding to catalyze development of interdisciplinary research teams and projects that involve scholarly research in more than one department, research center, college, or institution. Successful SPARC proposals require mutual effort by researchers from multiple disciplines. They must also provide outcomes that enhance USU faculty success in securing new, large-scale, interdisciplinary externally-funded grants.

GEM, RC, and SPARC awardees are required to develop and submit at least one proposal to an external funding agency within three months of project completion. Because proposal submission deadlines vary widely among different agencies, funding for RGS seed grant programs is offered twice yearly, with start dates of January 1 or July 1.

For FY 2015, the RGS seed grant program made 26 awards through its biannual competition cycles.

Sponsored Programs

Office restructure

In order to improve the efficiency of Sponsored Programs, a new office structure was implemented in August 2015. Under the new office structure, Sponsored Programs is divided into three teams, consisting of a Senior Grant and Contract Officer, Grant and Contract Officer, and Grant and Contract Administrator. Each team member has a role in (1) ensuring that proposals are thoroughly reviewed, approved, and submitted to sponsors, (2) negotiating and approving award documents, and (3) managing contractual post-award issues.

The benefits of the office restricts follow:

- One main point of contact for campus
- Knowledgeable interactions with Sponsored Programs
- Increased visibility of Sponsored Programs staff at the campus and department level
- Improved compliance monitoring and enforcement
- Consistent support
- Built-in back-up system
- Quicker turnaround times on proposals and awards

Proposals and awards

Sponsored Programs processed more award actions (1,125) in FY15 than in any prior fiscal year. Sponsored Programs submitted more proposals (1,372) in FY15 than in any prior fiscal year.