



OFFICE OF RESEARCH & CREATIVE ACTIVITY

# Annual Report FY19



## Message from the Associate Provost for Research and Creative Activity

I am very pleased to present the Office of Research and Creative Activity's Annual Report for FY19, summarizing the excellent efforts of Western Kentucky University's faculty and staff in seeking and obtaining external support for research, creative scholarship, education, and public service. These efforts have provided support for faculty and student excellence across all disciplines and have yielded significant, positive impacts on our campus, in our community, and beyond. There were also many impressive accomplishments related to outcomes associated with our Research and Creative Activities Program (RCAP), Faculty Undergraduate Student Engagement program (FUSE), and the Quick Turnaround Grant program (QTAG) in FY19. WKU is widely recognized as an institution whose faculty members excel at student-centered scholarly research, creative activities, and service. Please accept my gratitude for the campus-wide efforts supporting sponsored programs and internal grants at WKU.

I hope you will join me in congratulating the outstanding faculty members who received their College Award for Faculty Research and Creative Activity, the University Faculty Award for Research and Creative Activity, and Sponsored Programs award recognition for FY19. As we move into fiscal year 2020, staff in the Office of Research and Creative Activity look forward to continuing to expand and extend the reach of their services to all faculty, staff, and students.

-Dr. Cheryl D. Davis  
Associate Provost for Research and Creative Activity  
Dean of the Graduate School



### **Faculty Award for Research/Creativity**

Lisa Duffin–Psychology (CEBS)  
Rachel Tinius–School of Kinesiology, Recreation, & Sport (CHHS)  
Johnny Chan–Finance (GFCB)  
Sanju Gupta–Physics and Astronomy (OCSE)  
Sophia Arjana–Philosophy & Religion (PCAL)  
Haiwang Yuan–Library Public Services

### **University Faculty Award for Research/Creativity**

Rachel Tinius – School of Kinesiology, Recreation, & Sport (CHHS)

### **Office of Sponsored Programs**

#### **First Time Lead Awardees**

Yongming Deng - Chemistry  
Kirolos Haleem - Engineering & Applied Sciences  
Jean-Luc Houle - Folk Studies & Anthropology  
Diane Lickenbrock - Psychological Sciences  
Allie McCreary - Kinesiology, Recreation, & Sport  
Lora Moore - School of Nursing & Allied Health  
Corinne Murphy - Dean, College of Education & Behavioral Sciences  
David Pollack - Folk Studies & Anthropology  
Eric Rappin - Kentucky Climate Center  
Edrisa Sanyang - Public Health  
Molly Swietek - Public Radio Services  
Jenni Teeters - Psychological Sciences  
Dex Wood - ITS

#### **Prolific Proposer**

Brent Bjorkman - Folk Studies & Anthropology  
Jason Crandall - Kinesiology, Recreation, & Sport  
Vladimir Dobrokhotov - Physics & Astronomy  
Ali Er - Physics & Astronomy  
Kirolos Haleem - Engineering & Applied Sciences  
Mary Lloyd Moore - Clinical Education Complex  
Shane Palmquist - Engineering & Applied Sciences  
Eric Rappin - Kentucky Climate Center  
Bruce Schulte - Biology

Sandy Staebell - Kentucky Museum

**Million Dollar Club**

Farhad Ashrafzadeh - Engineering & Applied Sciences

Brian Brausch - Educational Talent Search

Gordon Emslie - Physics & Astronomy

Stacy Leggett - Educational Administration, Leadership & Research

**Ten Million Dollar Club**

Nahid Gani - Geography & Geology

Royhan Gani - Geography & Geology

**Department Awards**

Chemistry - Department with the largest percentage of proposing faculty

Physics & Astronomy - Department with the largest percentage of faculty awardees

**Associate Provost's Award for Innovation & Impact**

Jason Crandall - Kinesiology, Recreation, & Sport

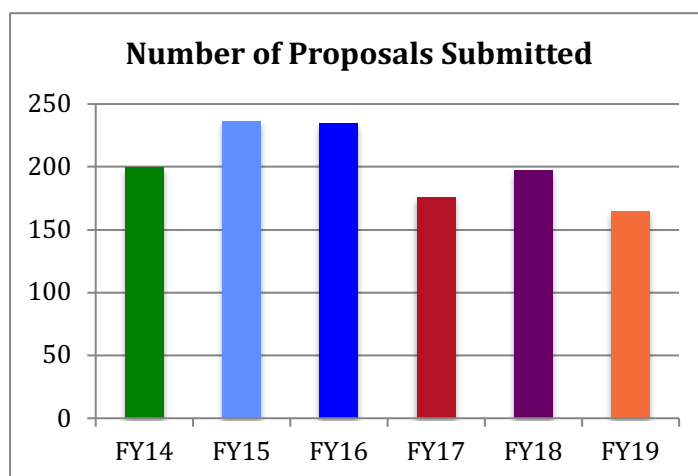
## Office of Sponsored Programs

The Office of Sponsored Programs (OSP) is the coordinating office for both externally and internally funded research and sponsored projects at Western Kentucky University. We serve as the principal point of contact for faculty and staff seeking and managing external funding for research, public service, instruction, student services and equipment/instrumentation. OSP staff members offer assistance across the entire spectrum of sponsored programs activities, from identifying a potential source of funding to reviewing the terms and conditions of awards made to the institution.

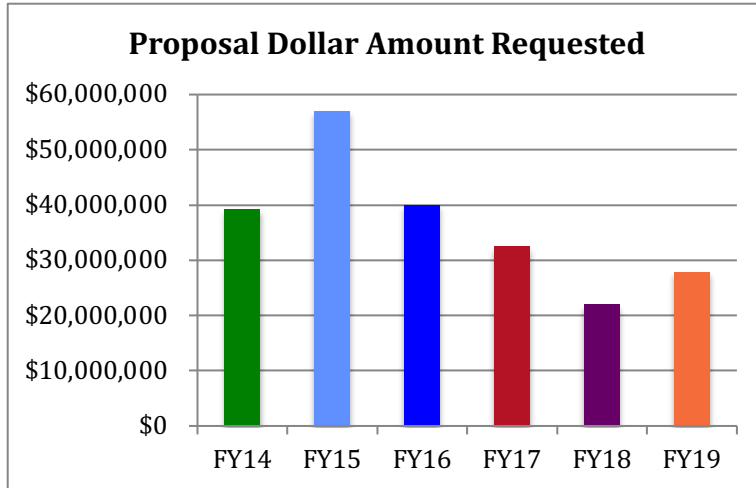
Data pertaining to extramural grants and contracts in FY19 are summarized below. Please do not hesitate to contact us with any questions or with requests for additional information.

### Proposals and Awards

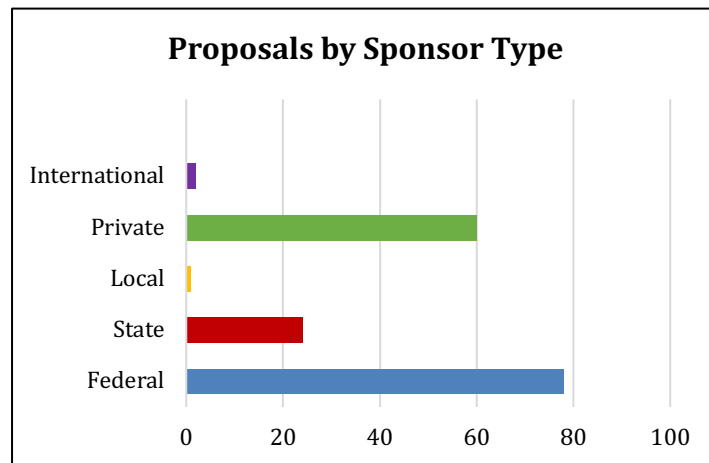
Each year, faculty and staff work diligently to prepare and submit proposals to external sponsors to request support for their research and projects. The proposal must follow specified guidelines, outline the proposed project, and justify the budgetary requirements to complete the project. OSP's Pre-Award team assists with the entire proposal development process, including finding funding, reviewing requirements and guidelines, budget development, compliance review, and proposal submission. The Post-Award team in the Office of Sponsored Programs is also committed to providing timely and accurate assistance to faculty, staff, and external sponsors. They assist principal investigators in exercising good fiscal management practices for the administration of externally funded programs at WKU from award receipt to closeout. They also provide expertise in interpreting guidelines and promoting compliance with sponsor and University policies.



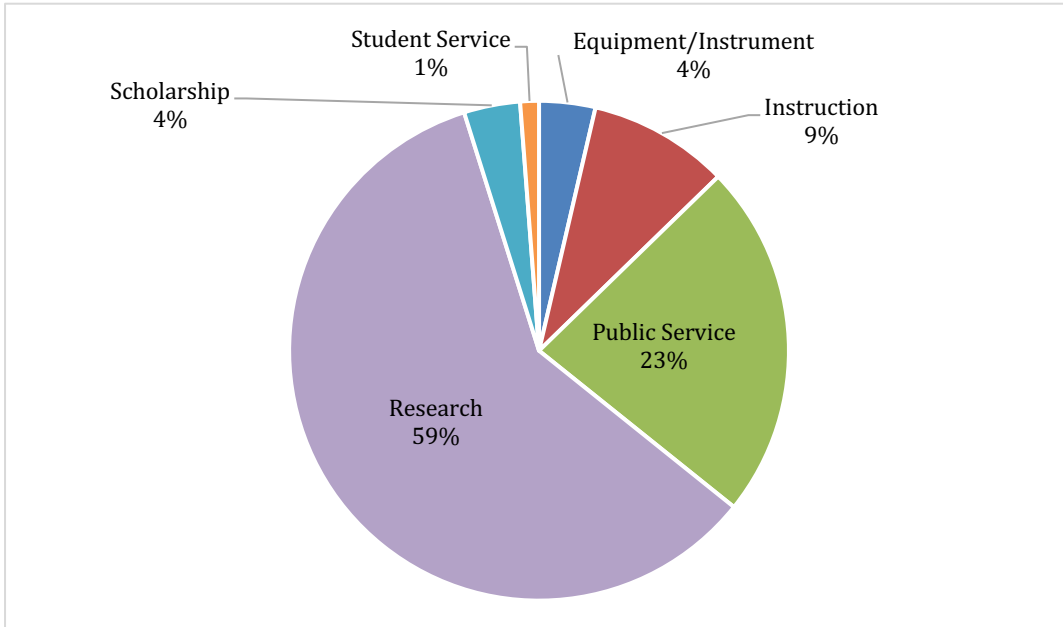
**Figure 1.** A six-year comparison of the number of proposals submitted through WKU's Office of Sponsored Programs. In FY19, 165 proposals were submitted with an average of 201 proposals submitted annually over 6 years.



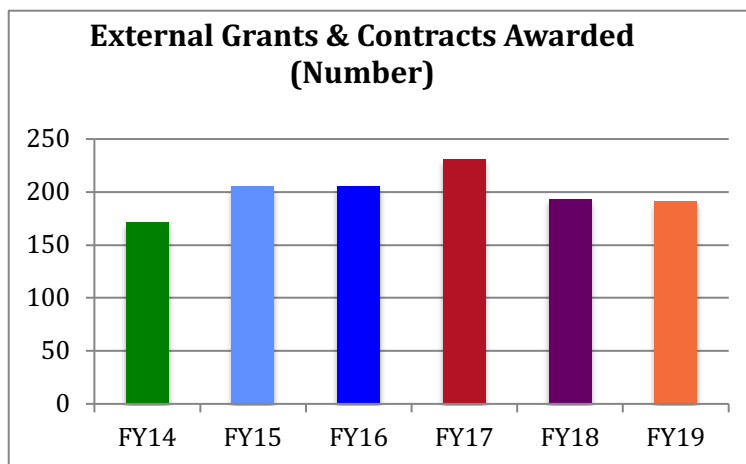
**Figure 2.** A six-year comparison of the total dollar amount requested in external proposals. The total amount requested in FY19 was \$27,836,838, which was an increase of \$5,865,388 as compared to FY18.



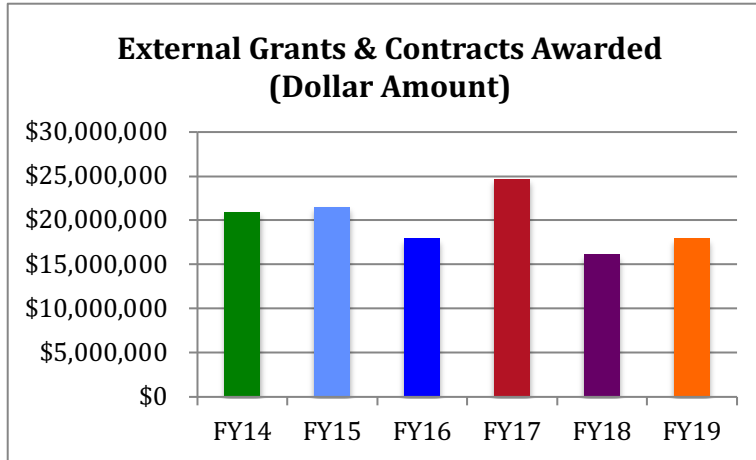
**Figure 3.** Breakdown of proposal number by project type in FY19. The highest number of proposals (78/165) was submitted to federal sponsors. The second highest number of proposals (60/165) went to private sponsors.



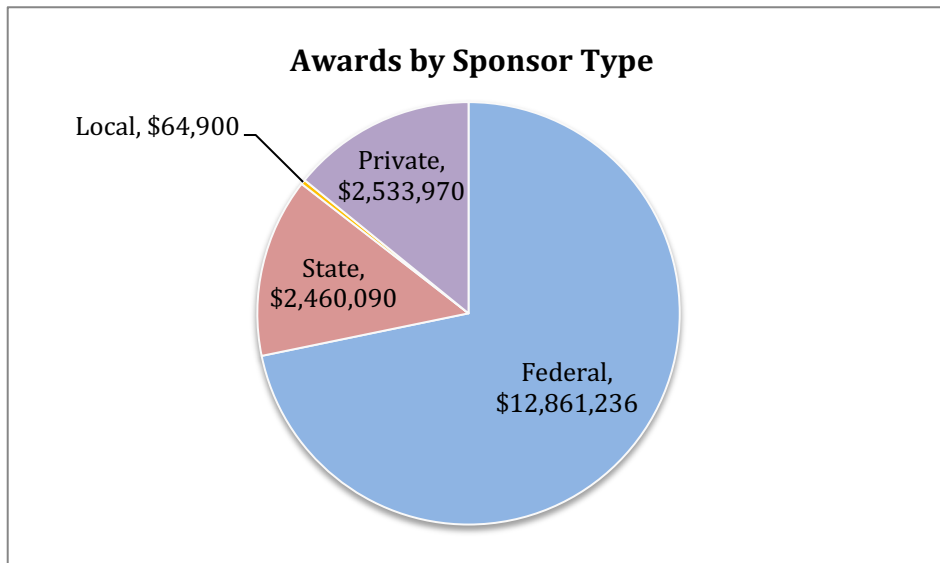
**Figure 4.** Representation of FY19 proposals by project type. In FY19, 59% of proposals submitted were for Research projects.



**Figure 5.** A six-year comparison of the number of awards received annually between FY14 and FY19. There were 191 awards received in FY19. Annual award numbers have ranged from a low of 171 in FY14 to a high of 231 in FY17.

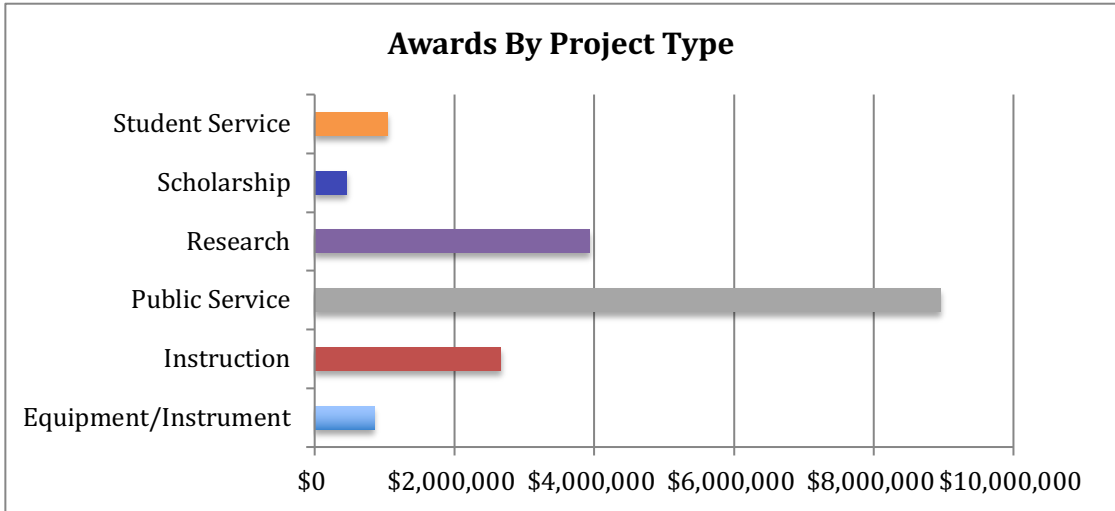


**Figure 6.** The total dollar amount awarded annually from FY14 to FY19. The total dollar amount awarded in FY19 (\$17,920,196), which was an increase of \$1,816,626 as compared to FY18.

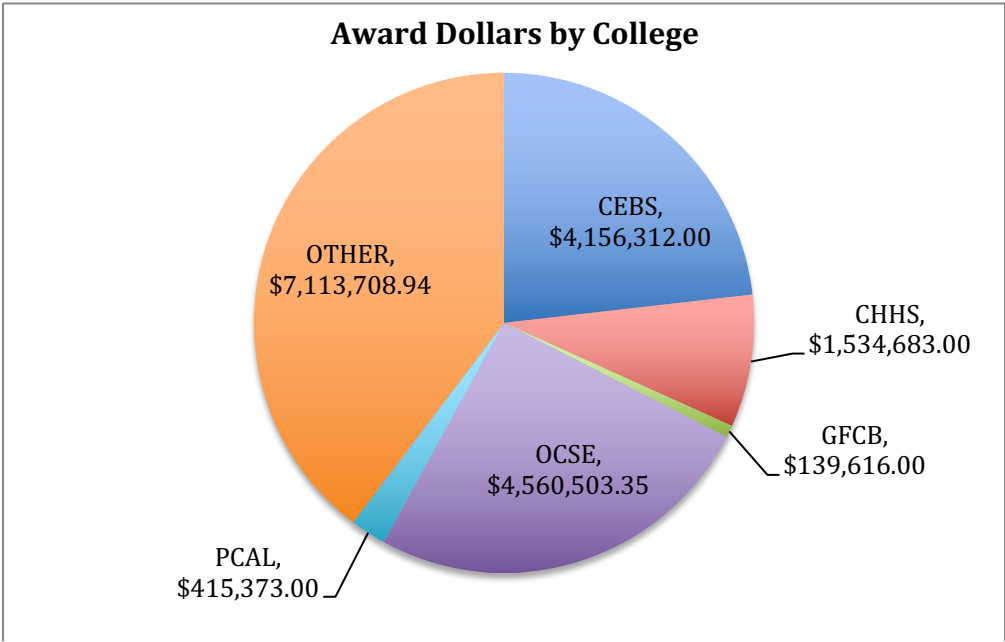


**Figure 7.** External award dollars received categorized by sponsor type in FY19. 72% of all external grant and contract dollars awarded in FY19 came from federal sources, the second highest percentage (14%) came from private entities.





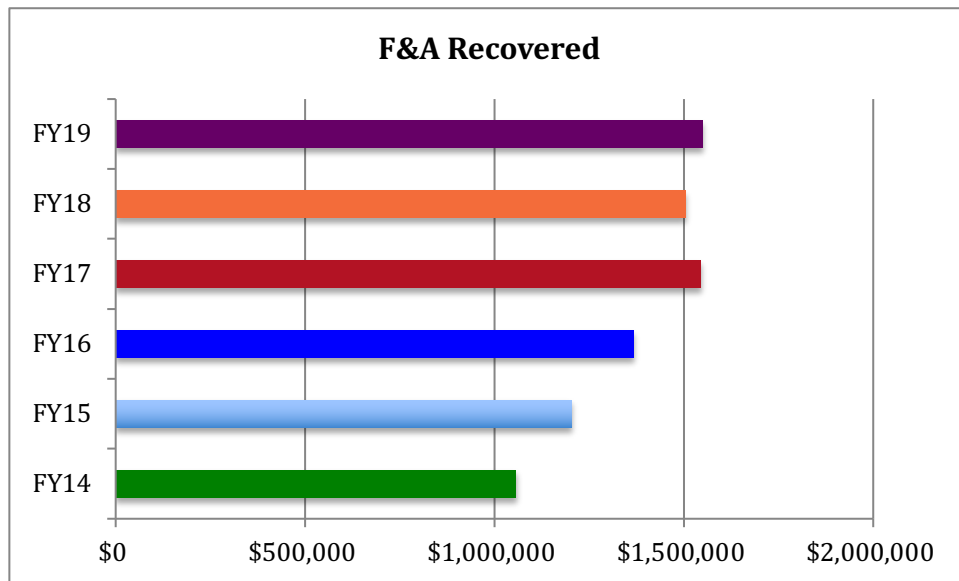
**Figure 8.** Breakdown of FY19 award dollars by project type. The largest dollar amount received was for projects categorized as “Public Service” (\$8,960,870). The second largest dollar amount received was for projects categorized as “Research” (\$3,933,842).



**Figure 9.** Total award dollars by college for FY19. Ogden College of Science and Engineering yielded the largest dollar amount in external awards in FY19 at \$4,560,503.35.

## Facilities and Administrative Costs

Facilities and administrative costs (also known as overhead or indirect costs) are those costs associated with providing and maintaining the infrastructure required to support sponsored activities, but which cannot easily be attributed to a specific project. Indirect costs are requested according to WKU's federally negotiated indirect cost rate, unless specifically prohibited or limited by the sponsor. Figure 10 below shows a five-year comparison of the total amount of F&A recovered annually.



**Figure 10.** A six-year comparison of total F&A recovered annually.

## Research and Creative Activities Program (RCAP) FY11-17 Outcome Report

RCAP funding is provided by the Office of Research and Creative Activity to encourage eligible full-time faculty and instructors at all WKU campuses to develop individual projects for research, scholarly pursuits, and creative activities, while promoting the pursuit of external funding sources.

**Category I** funds are considered "seed" monies to enhance the competitiveness of a subsequent proposal submission for external funding. Category I awardees are required to submit a proposal for extramural funding as an outcome of funding.

**Category II** funds support the general development, expansion, or enhancement of faculty research and scholarly activity, and/or the creative and performing arts.

The following report summarizes the outcomes and return on investment for RCAP Fiscal Years 2011-2017. During the reported period, 216 projects received RCAP funding totaling \$1.97 million dollars. (RCAP 18-19 outcomes have not yet been captured, since award periods are ongoing at the time of this report).

### Outcomes

**Extramural Proposals & Awards** – While submission of extramural proposals is a requirement of Category I awards, all awardees may choose to submit subsequent funding requests to external sponsors. Several projects during the reporting period served as seed funding for subsequent external proposal submissions. Of the 222 external proposals submitted as a result of RCAP funding, 65 received funding. The amount of external funding received by WKU as a result of RCAP FY11-17 support is \$6,499,573.

**Student Engagement** – RCAP guidelines promote that, “all projects should aim to incorporate undergraduate and/or graduate students...” As a result of RCAP support (both directly and indirectly), 680 students gained valuable experience in research, creative activities, and other scholarly pursuits.

**Publications** – Most RCAP awards result in a publication of some form. During the reported period, 154 journal articles and 10 manuscripts were published as a result of RCAP funding.

**Other Outcomes** – RCAP projects resulted in 443 presentations\*, 254 posters\*, and 130 creative works. Additionally, RCAP projects added 8 books to departmental/library resources and added 88 pieces of small and large equipment to the university’s infrastructure.

### II. Return on Investment

The primary purpose of RCAP Category I funds are to serve as "seed" monies to enhance the competitiveness of a subsequent proposal submission for external funding.

Such funding serves to provide preliminary data, proof of concept, project/fund management experience, publications, etc., all of which contribute to strengthening external proposal submissions from WKU.

During the reporting period (FY11-FY17), RCAP support totaled \$1,973,646. This investment reflects WKU's commitment to research, scholarly endeavors, and creative activities via the RCAP program. As a result of RCAP funding, 65 external grants were awarded totaling \$6,499,573. **This 329% return on investment clearly demonstrates the value of RCAP funding in stimulating competitive external proposals.**

Return on investment for FY14 and FY16 awards were particularly exceptional, with several large federal awards received by WKU faculty that were related RCAP seed funding. During these two funding years, WKU invested \$504,540 to support RCAP projects; in turn, related projects totaling over \$4.25 million dollars in external funding were awarded to WKU through external funding sources. This return on investment is a staggering 842%.

**QUICK FACTS:**

- Total RCAP Investment FY11-FY17: \$1,973,646.16
- Total External Funding Connected to RCAP FY11-17: \$6,499,573.00
- Total Return on Investment FY11-FY17: 329%
- Total Return on Investment for RCAP To-Date (even with no outcomes captured for FY18-19): 257%

## National Science Foundation HERD Survey Results

The NSF HERD (Higher Education Research & Development) survey collects data from universities and colleges in the U.S. on annual research expenditures. Surveys are submitted each January. The NSF publishes the HERD survey data each year in November, and also publishes the rankings of colleges and universities in various categories of research expenditures: Total R&D Expenditures (from both external sources and internal sources); Expenditures from federal sources; and Expenditures from all external sources, etc.

At WKU, data required for completion of the survey are provided by budget managers from all colleges, staff in Grants and Contracts Accounting, and staff in the Office of Sponsored Programs. Paula Mattison, Assistant Director, Grants Contracts Accounting, collects the relevant data from across the campus, assembles the data and performs the necessary calculations, and completes and submits the survey.

It is important to keep in mind that the NSF HERD survey pertains ONLY to research expenditures. Our profile of external grants and contracts includes awards in the categories of Instruction, Public Service, Research, Student Services, Equipment, and Scholarships. In FY19, WKU received \$17,920,196 in external grants and contracts, and approximately 22% of external awards and contracts received were categorized as “research”.

Below you can see WKU’s nationwide ranking (as compared to other Kentucky public universities) in the category of Total R&D Expenditures (external + internal) for FY18, FY17, and FY16. FY19 rankings will not be available until November of 2020. In the HERD ranking, a lower score is associated with a higher ranking in the survey.

### **FY 18**

UK	63
UofL	125
<b>WKU</b>	<b>339</b>
KSU	343
MSU	487
MoSU	510
NKU	558
EKU	609

### **FY 17**

UK	62
UofL	122
<b>WKU</b>	<b>324</b>
KSU	357

MoSU	475
MSU	486
NKU	554
EKU	599

**FY 16**

UK	64
UofL	112
<b>WKU</b>	<b>337</b>
KSU	367
MoSU	487
MSU	508
NKU	527
EKU	570

The Table below shows WKU's reported **Total R&D expenditures** from 2012 to 2018.

FY2012	\$10,639,000
FY2013	\$ 9,322,000
FY2014	\$ 8,280,000
FY2015	\$ 7,854,000
FY2016	\$ 8,926,000
FY2017	\$10,814,000
<b>FY2018</b>	<b>\$9,617,000</b>

We are pleased to extend our sincere thanks and congratulations to the many dedicated faculty and staff members who participated in sponsored projects activities in FY19.

Office of Research & Creative Activity  
Wetherby Administration Building 209  
[research@wku.edu](mailto:research@wku.edu)  
270-745-6733

Office of Sponsored Programs  
Wetherby Administration Building 209  
[sponsored.programs@wku.edu](mailto:sponsored.programs@wku.edu)  
270-745-4652

Office of Research Integrity  
Wetherby Administration Building 301  
[ori@wku.edu](mailto:ori@wku.edu)  
270-745-2129