



College of Engineering 2016 Fact Book





AS DEAN OF ENGINEERING, I am proud to present the 2016 Fact Book. This collection of data portrays who we are as a college and illustrates our role as part of a land grant university. Organized according to the objectives of our strategic plan, it presents the metrics we use to track our progress toward our goals. Not only does this document allow us to be transparent and accountable to our stakeholders, it tells our story. You can see where we have been, what progress we have made and how we are working to prepare our students, faculty, staff and alumni for tomorrow.

John R. English
Dean, College of Engineering
Professor of Industrial Engineering
Irma F. and Raymond F. Giffels Endowed Chair in Engineering



College of Engineering 2016 Fact Book

Our stories. Our progress. Our future.



2	University of Arkansas Highlights
4	College of Engineering Highlights
8	Strategic Plan
10	Balanced Growth
14	Objective One: Increase student quality and diversity
20	Objective Two: Provide student centered education
22	Objective Three: Recruit and retain high quality faculty and staff
24	Objective Four: Increase research productivity
28	Objective Five: Increase economic development
30	Objective Six: Increase alumni and corporate partnerships
32	Objective Seven: Provide high quality infrastructure
35	Appendix
40	Contact Information



Fall 2016 Total Enrollment

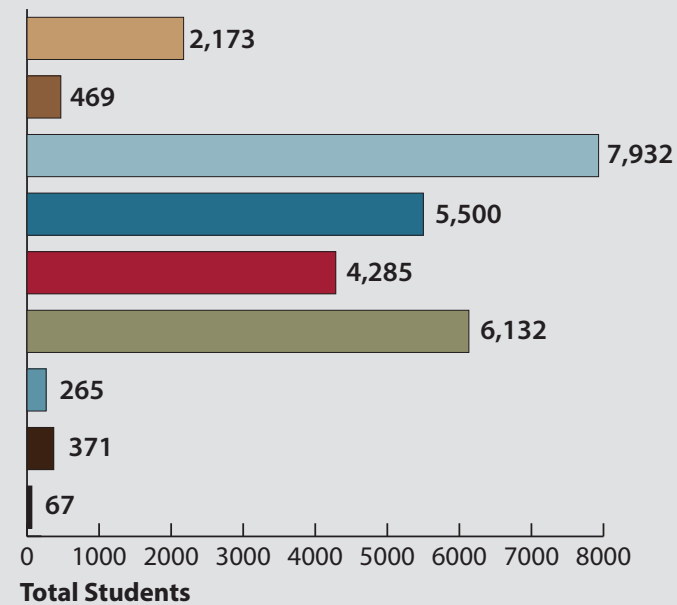
Undergraduate **22,548**

Graduate **4,275**

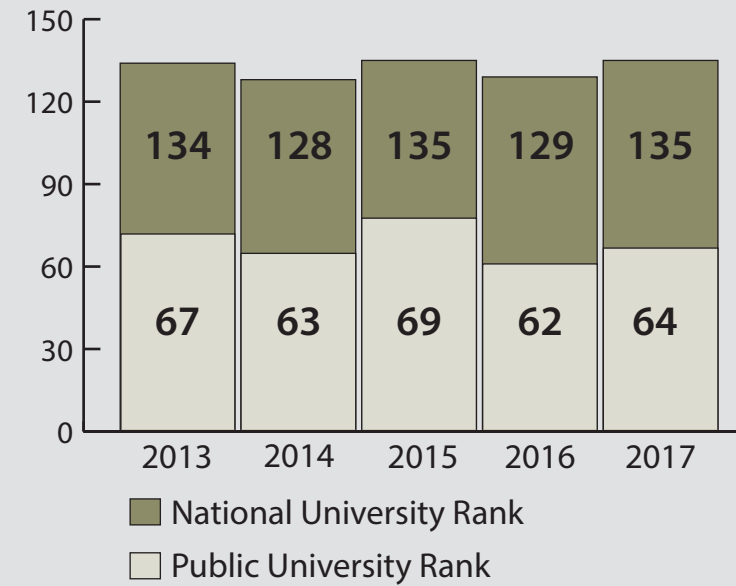
Law **371**

Total Enrollment 27,194

University of Arkansas Fall 2016 Enrollment *(Degree Seeking Only)*

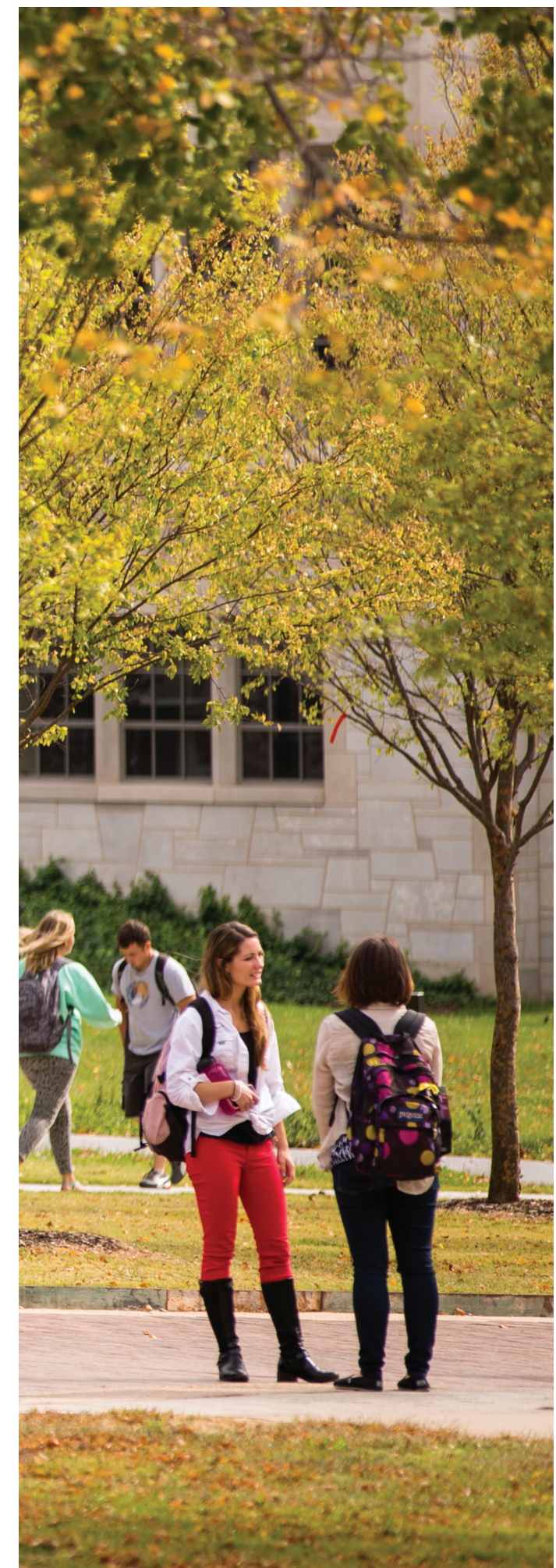


University of Arkansas Rankings*



* Source: U.S. News and World Report

- Dale Bumpers College of Agricultural Food and Life Sciences
- Fay Jones School of Architecture
- J. William Fulbright College of Arts and Sciences
- College of Education and Health Professions
- College of Engineering
- Sam M. Walton College of Business
- Graduate School Interdisciplinary
- School of Law
- Continuing Education (correspondence only)





2016 Enrollment Highlights

Undergraduate **3,311**

Graduate* **993**

College of Engineering
Total Enrollment 4,304

Total undergraduate enrollment
is **up 1.4 percent** over 2015.

Since 2007, undergraduate enrollment has
more than doubled.

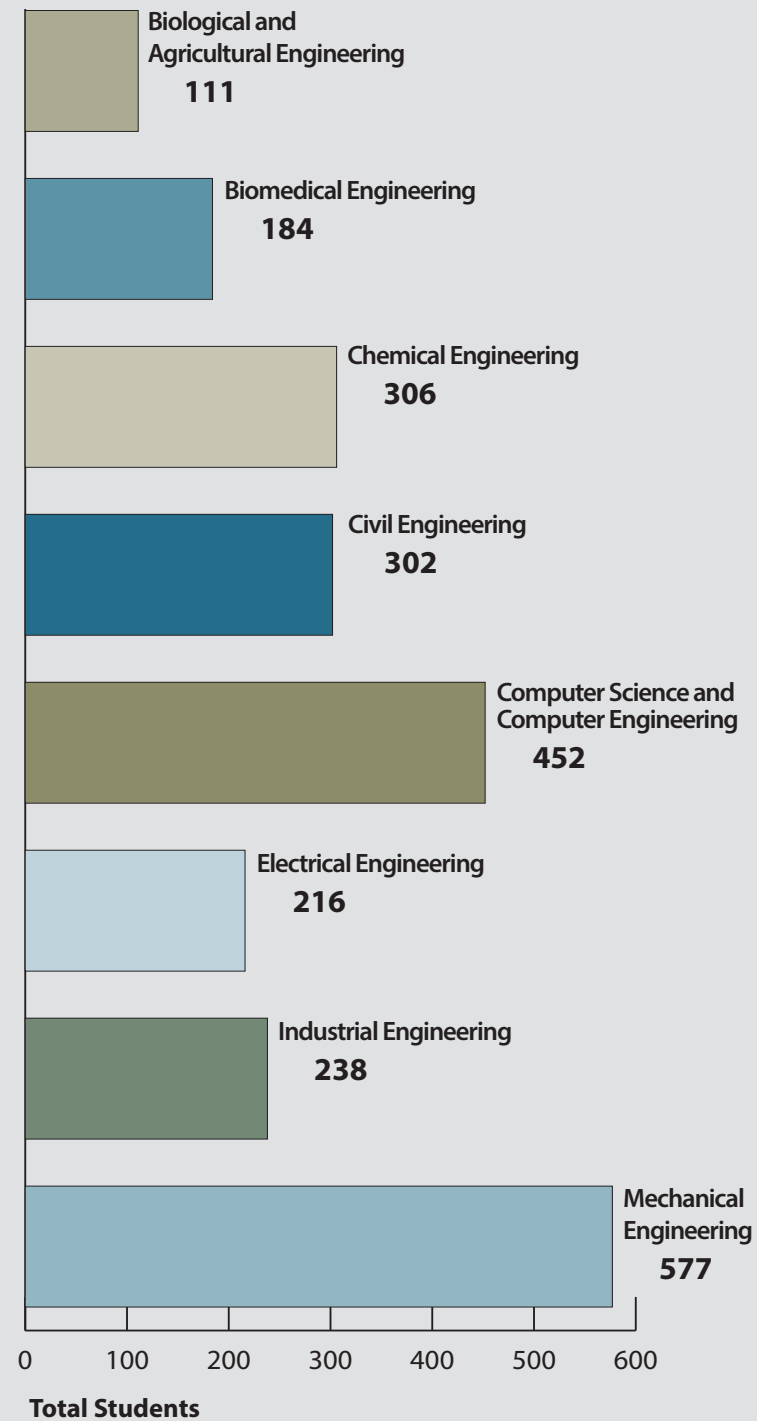
We have **756 new freshmen**
for 2016.

Our 2016 freshman class is
24 percent female,
The total percentage of female undergraduates
is at a record high at **23.4 percent.**

Underrepresented students—**female, minority
and first generation college students**—make up
52 percent of the freshman class.

* Includes engineering students enrolled in interdisciplinary programs.

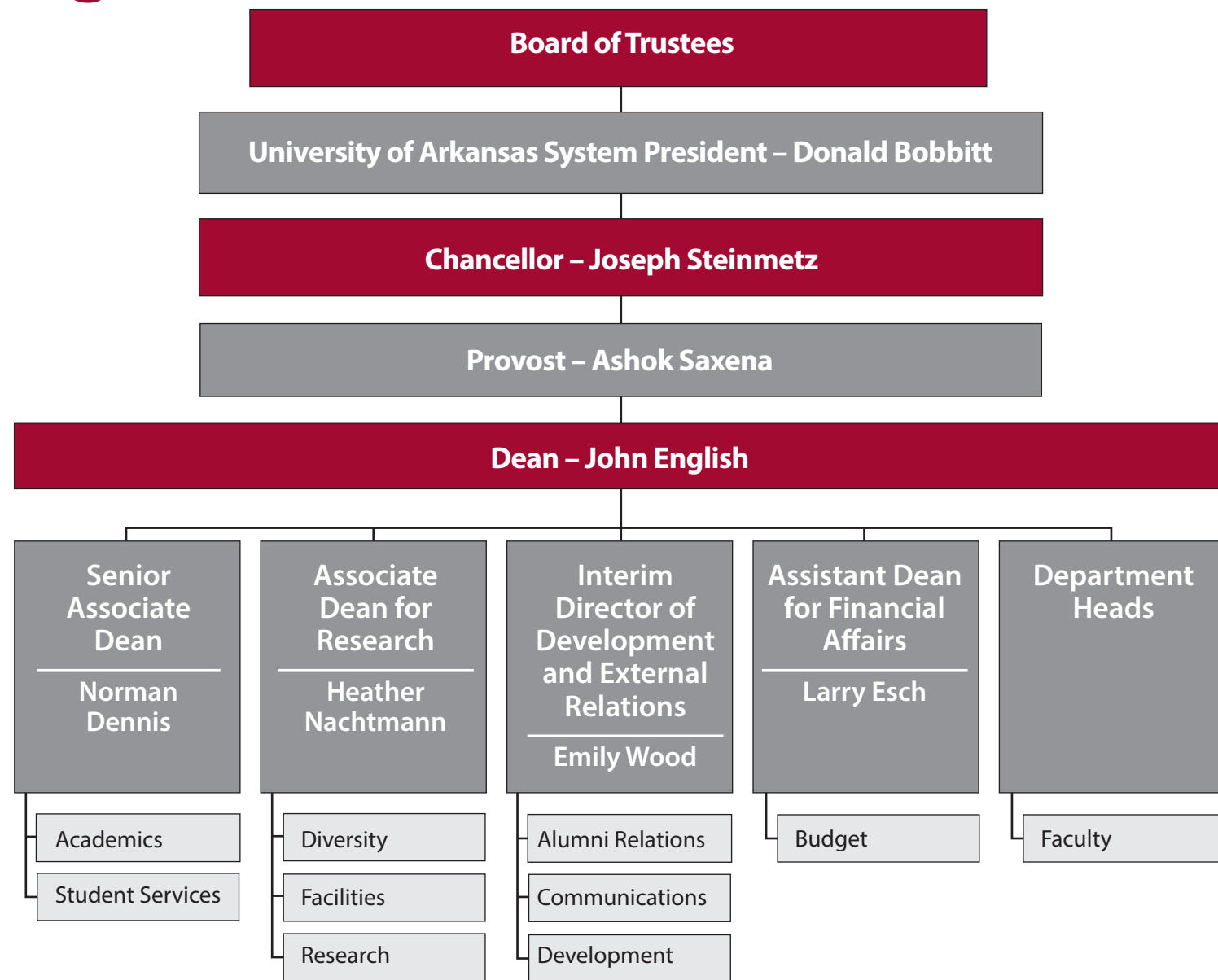
Fall 2016 Undergraduate Enrollment by Department*



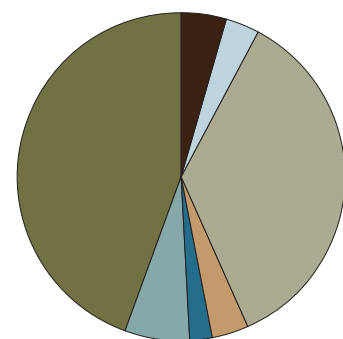
* Students in the Freshman Engineering Program and students enrolled in distance learning are not included.



College of Engineering Organization & Finances

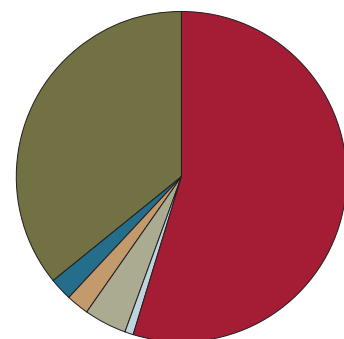


2016 Revenue (excluding gifts)



- State Appropriations & Tuition \$22,948,204
- Distance Learning Revenues, Ft Smith, Service Centers, Conferences \$3,325,452
- Research Incentive Funds \$1,077,827
- Biological Engineering Teaching and Agricultural Experiment Station* \$1,893,397
- Sponsored Research ** \$18,372,457
- Sponsored Activities and Scholarships \$1,658,126
- Student Equipment Fee Revenues (TELE-net) \$2,436,534

2016 Expenditures (excluding gifts)



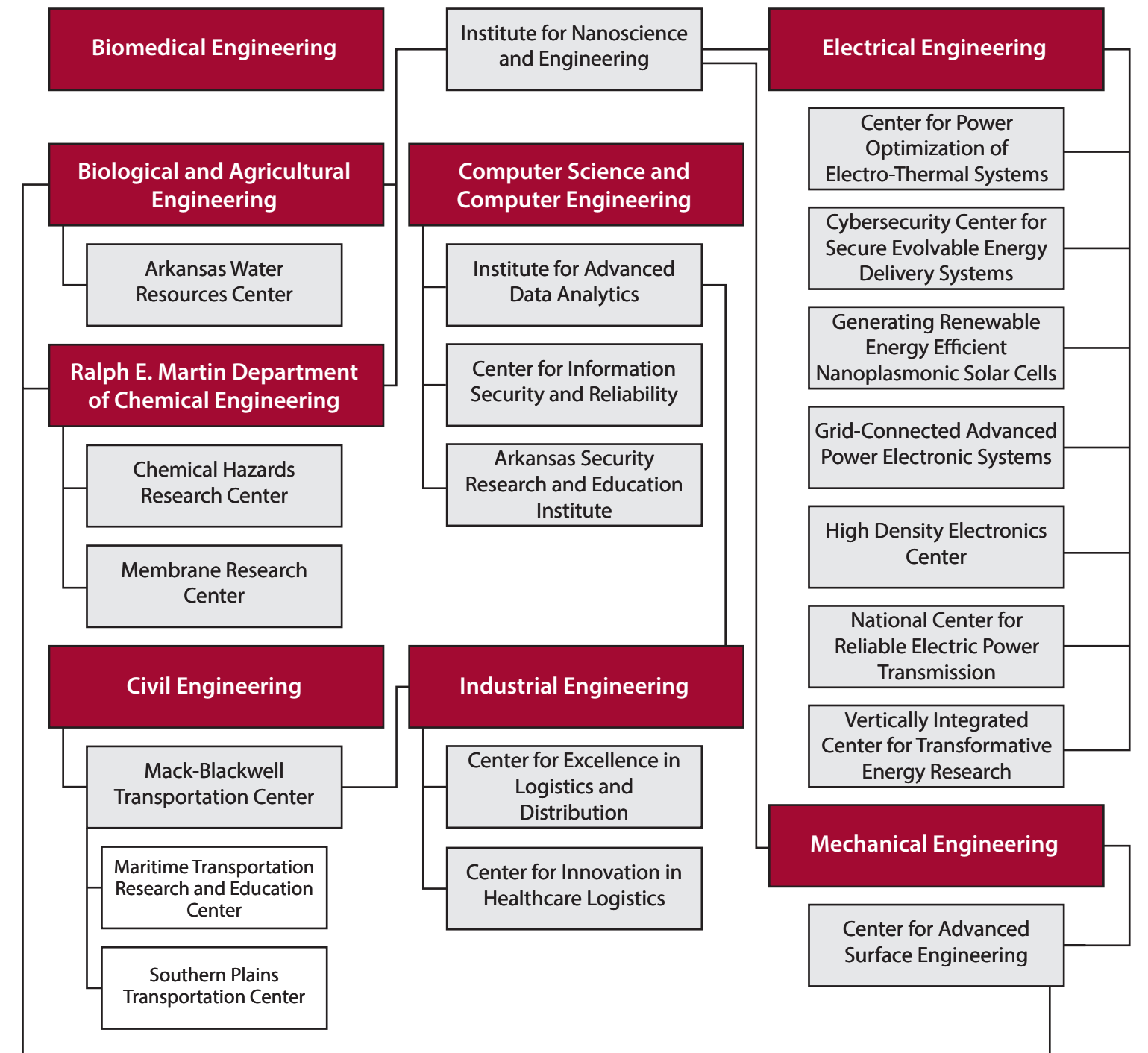
- Salary and Benefits \$18,211,503
- Operating Expenditures \$1,149,449
- Dept Restricted Fees/Misc \$1,121,038
- Student Equipment Fees \$2,082,936
- Scholarships \$482,364
- Research*** \$27,966,133

Total Revenue: \$51,711,996
Total Expenditures: \$51,013,423

For complete financial information, see Appendix page 36

* Cooperative Extension Service not included
** As reported to ASEE and USNWR
*** Reported and compiled by the U of A Research Accounting Office and submitted to the NSF

College of Engineering Departments and Centers



Vision

Pursue excellence in research, scholarship and education, ensuring personal and professional growth for future generations of engineering leaders who will stimulate prosperity for Arkansas, the nation and the world.

Strategic Goals

- Recruit and graduate diverse, high-quality students ■ ■
- Increase number and diversity of faculty and staff ■ ■ ■
- Support, recognize and reward faculty and staff excellence ■ ■ ■
- Increase research proposals and funding ■ ■
- Build research and development culture ■ ■
- Cultivate relationships with alumni and corporate partners ■ ■ ■
- Plan for infrastructure growth ■ ■ ■ ■

Balanced Growth

- 3,500 undergraduate students
- 1,000 master's students
- 350 doctoral students
- 135 tenured and tenure-track faculty members
- 65 clinical and research faculty members
- 180 staff members
- \$300,000 in research expenditures per faculty member

Objectives

Increase student quality and diversity

Provide student centered education

Recruit and retain high quality faculty and staff

Increase research productivity

Increase economic development

Increase alumni and corporate partnerships

Provide high quality infrastructure

Metrics

- ACT and GRE quantitative scores
- Career placement rate
- Graduate student acceptance rate
- Honors student completion rate
- Student diversity

- Experiential learning participation
- Freshman retention rate
- Six year undergraduate graduation rate
- Student-faculty ratios
- Student semester credit hours per FTE
- Undergraduate degrees awarded

- Faculty retention
- National awards
- Professional society leaders and fellows
- National Academy of Engineering membership
- Staff to faculty ratios
- Faculty diversity

- Doctoral and master's degrees granted
- New research grants received
- Peer reviewed publications
- Research proposals submitted
- Research expenditures (total and per faculty)

- Invention disclosures
- Industry research expenditures
- Patents awarded
- Startup companies

- Philanthropic giving
- Endowed faculty positions
- Endowed scholarships and fellowships
- Percentage of alumni who give

- Academic space
- Research space
- Renovated space
- Renovation investment

Preparing You for Your Tomorrow



Ryan DuChanois
B.S.C.E. 2015
2015 Outstanding Senior

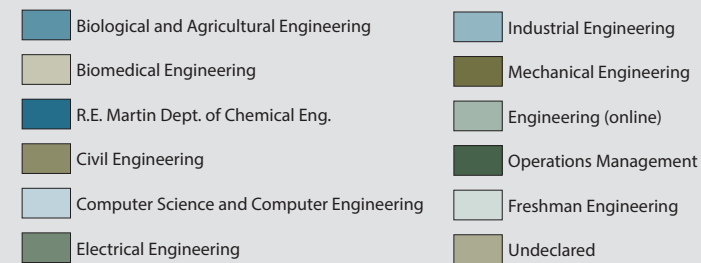
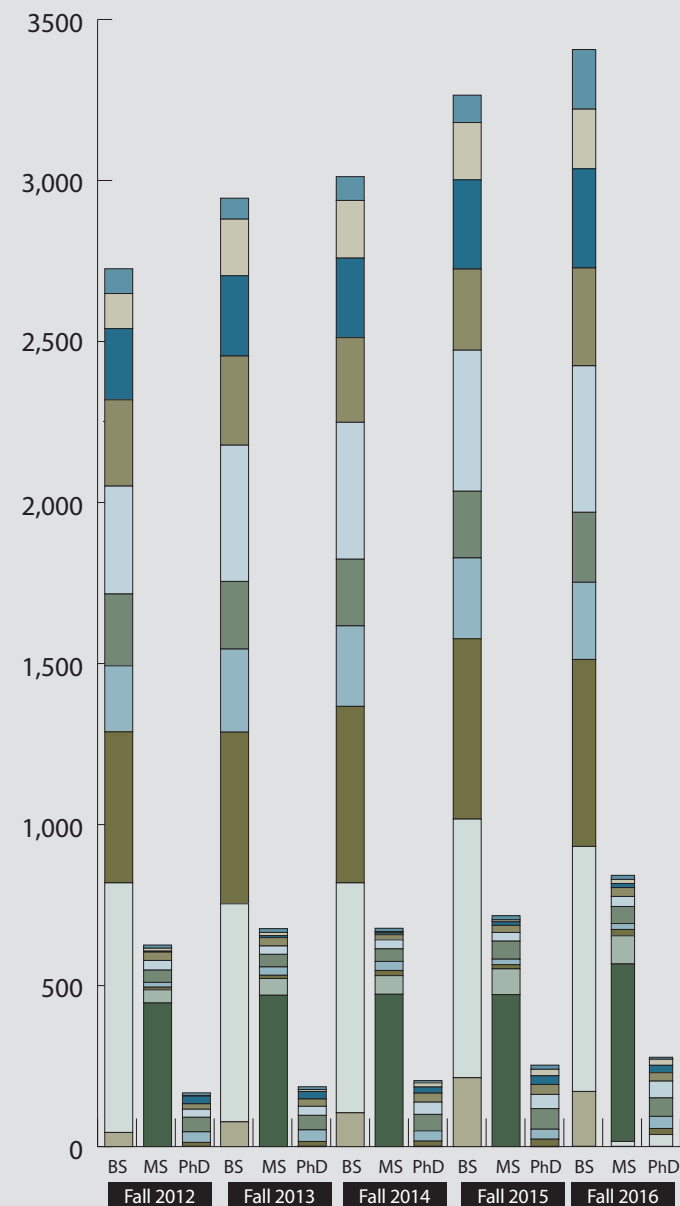
Ryan DuChanois, an Honors College civil engineering graduate, managed to combine superb academic scholarship with a wealth of extra-curricular and service activities.

DuChanois participated in research projects in South Africa and at the University of Virginia, and he received an EPA-sponsored Greater Research Opportunity Fellowship to conduct research in Corvallis, Oregon. DuChanois has traveled as far as India to present his work at conferences.

In addition to his academic and research accomplishments, DuChanois has been an active leader in a variety of campus organizations. He is a member of the American Society of Civil Engineers, the Engineering Student Council and Chi Epsilon. He has worked as a peer mentor in the Freshman Engineering Program, and volunteered at the campus Center for Educational Access.

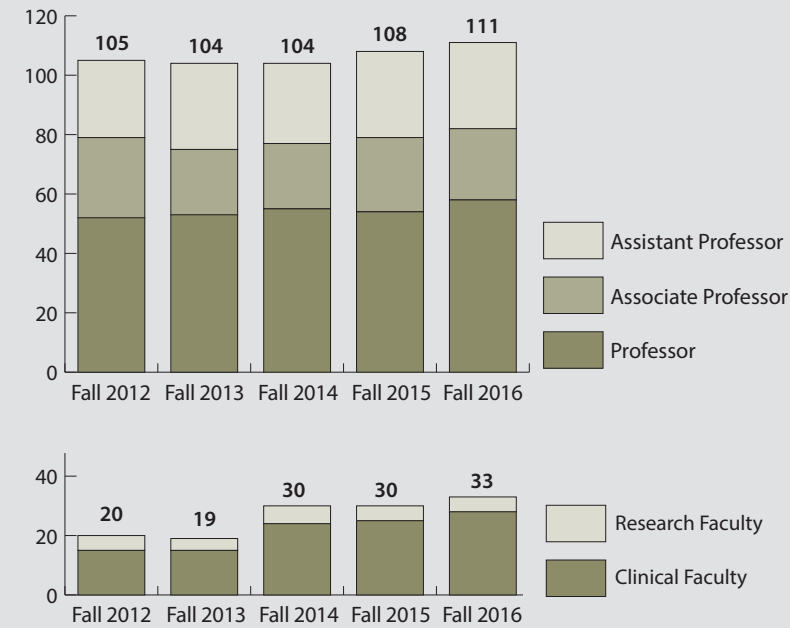
DuChanois received both the prestigious Gates/Cambridge Graduate Fellowship and an NSF Graduate Research Fellowship, and he will be pursuing graduate studies at Cambridge University next year.

Enrollment by Department*

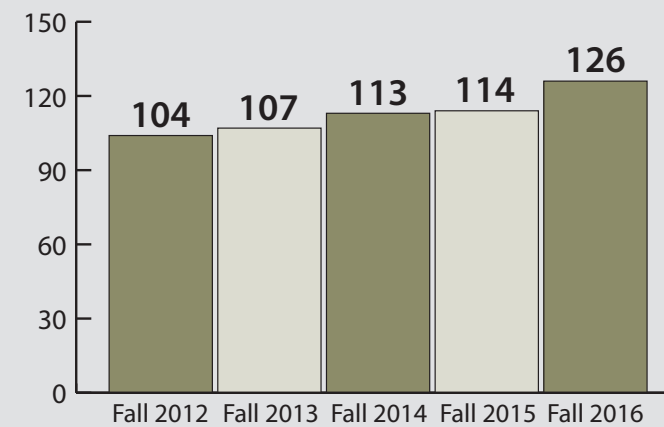


* Interdisciplinary students are included in the department of their faculty advisor.

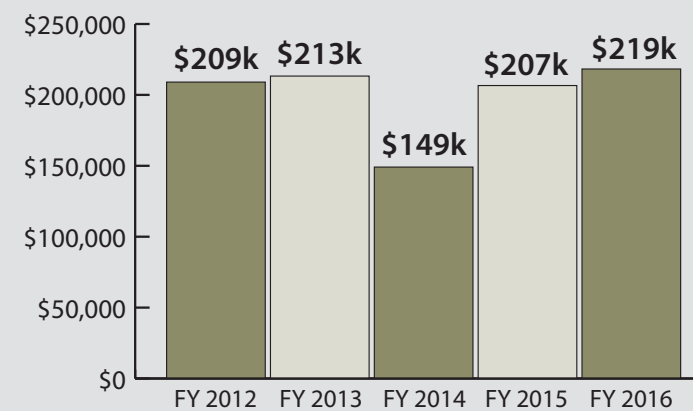
Faculty by Rank



Total Staff



Research Expenditures per Faculty



Balanced Growth Goals

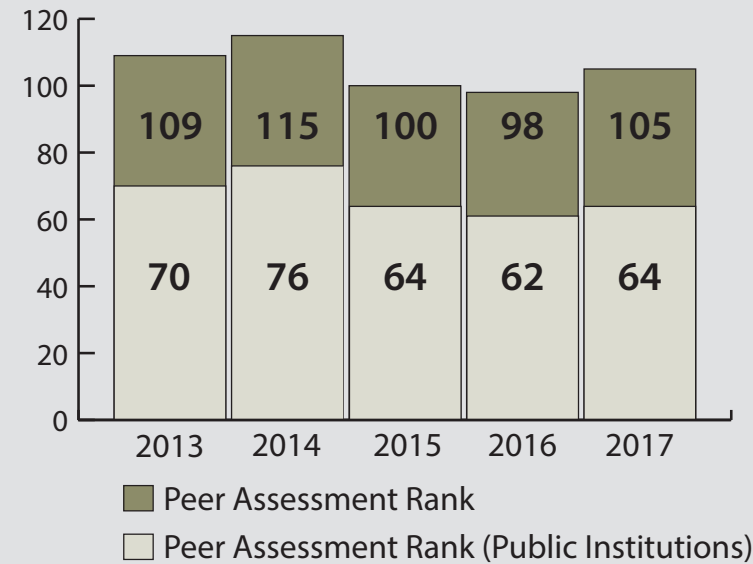
- 3,500 undergraduate students
- 1,000 master's students
- 350 doctoral students
- 135 tenured and tenure-track faculty members
- 65 clinical and research faculty members
- 180 staff members
- \$300,000 in research activity per faculty member



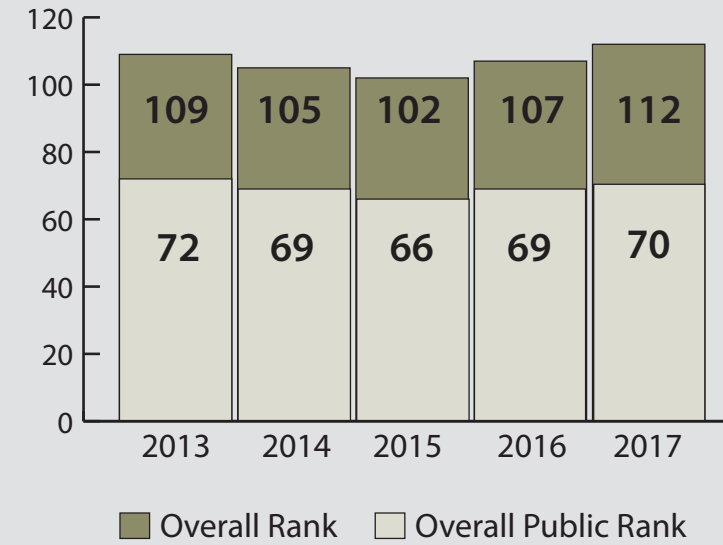
Adrian Beirise
B.S.M.E. 2011, M.S.B.E. 2016

As a graduate student in biological engineering, Adrian Beirise studied a method that would help researchers calculate the amount of oxygen consumed by sediment in lakes. A more accurate and efficient way to determine this would lead to more effective water quality management. Beirise presented his research at the annual meeting of the Institute of Biological Engineering and won the graduate poster competition there.

U.S. News & World Report Undergraduate Ranking



U.S. News & World Report Graduate Ranking



U.S. News & World Report Undergraduate Peer Assessment Score



U.S. News & World Report Graduate Reputation Score



U.S. News & World Report How Rankings Are Measured

U.S. News and World Report, a popular source of university rankings, ranks both undergraduate and graduate programs.

For Ph.D. programs, it considers metrics related to the quality of students the college attracts and metrics related to graduates' achievements.

U.S. News also surveys deans, program directors, senior faculty and professionals who hire engineering graduates to establish peer and corporate recruiter assessment data. For its college undergraduate rankings, U.S. News uses only peer assessment data. The 2017 rankings are based on a two year average of data from 2014 and 2015.

Graduate Rankings Metrics:

Quality assessment:	
Peer assessment	25%
Corporate recruiter assessment	15%
Student Selectivity:	
Mean GRE quantitative score	6.75%
Graduate acceptance rate	3.25%
Faculty resources:	
Student-to-faculty ratio - Ph.D.	7.50%
Student-to-faculty ratio - M.S.	3.75%
Percent of faculty in the National Academy of Engineering	7.50%
Doctoral degrees awarded	6.25%
Research activity:	
Total research expenditures	15%
Average research expenditures per faculty member	10%



Look for this icon throughout the book. It indicates metrics that directly affect our U.S. News ranking.

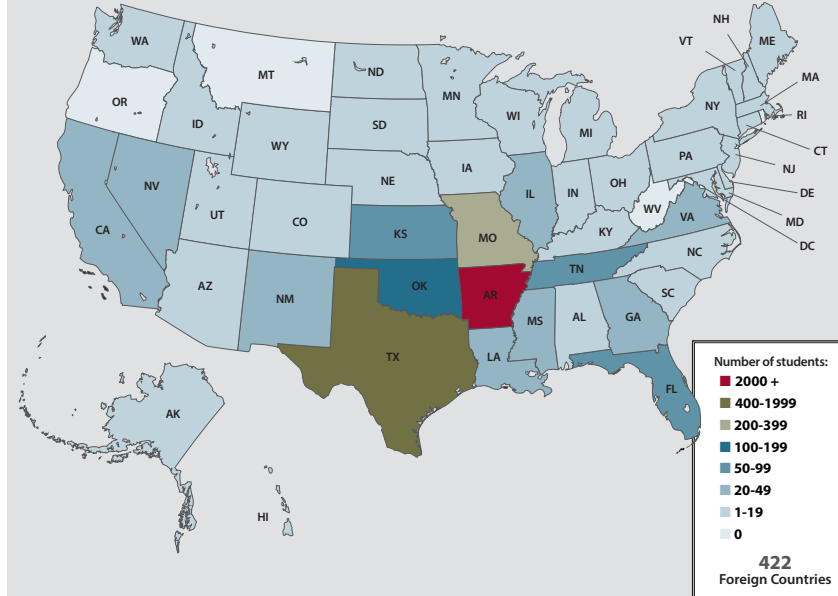


Norman Dennis
Senior Associate Dean
University Professor of Civil
Engineering

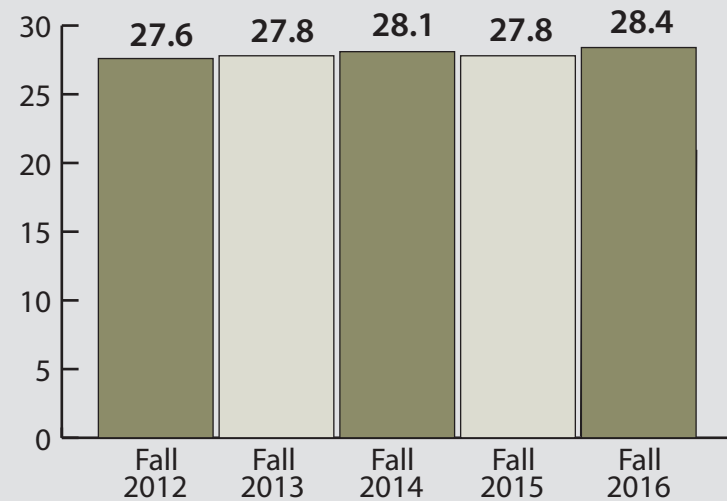
"Our students are our highest priority and our most valuable asset. We work hard to make sure we are attracting a diverse group of talented students, and through programs like the Freshman Engineering Program and the Engineering Career Awareness Program, we have been able to provide support for students, which is reflected in our improved retention and graduation rates. In addition, we provide our students with real-world experience, career development services and networking opportunities to help them start careers once they graduate.

"The College of Engineering is also committed to diversity. In fact, over half our student population is comprised of students who are traditionally underrepresented in the field of engineering—female students, minority students and first generation college students."

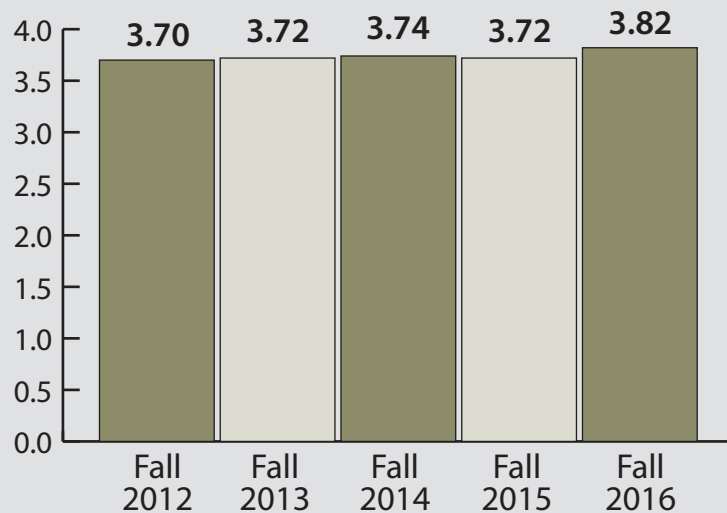
Our Students' Home States



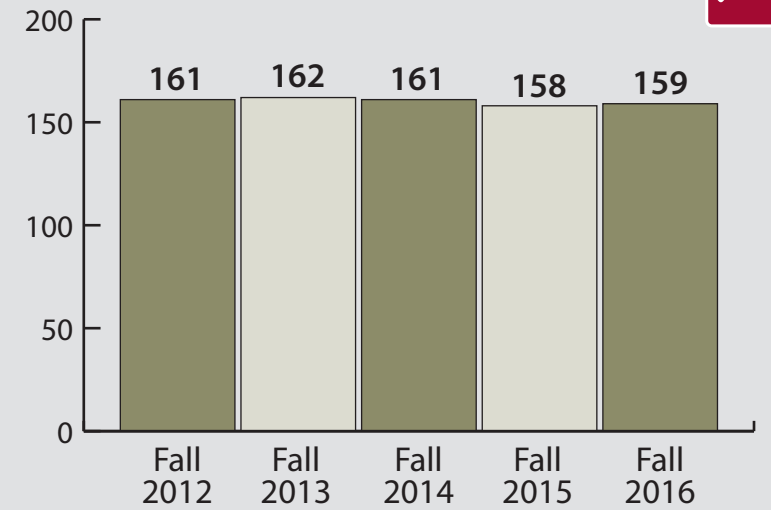
New Freshman ACT Average



Mean High School GPA

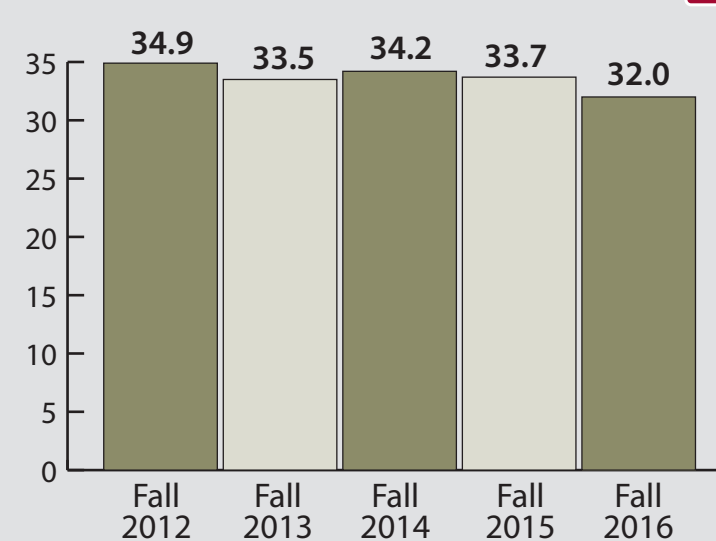


Mean GRE Quantitative Score*



* Does not include distance students.

Graduate Student Acceptance Rate



Preparing for Tomorrow:

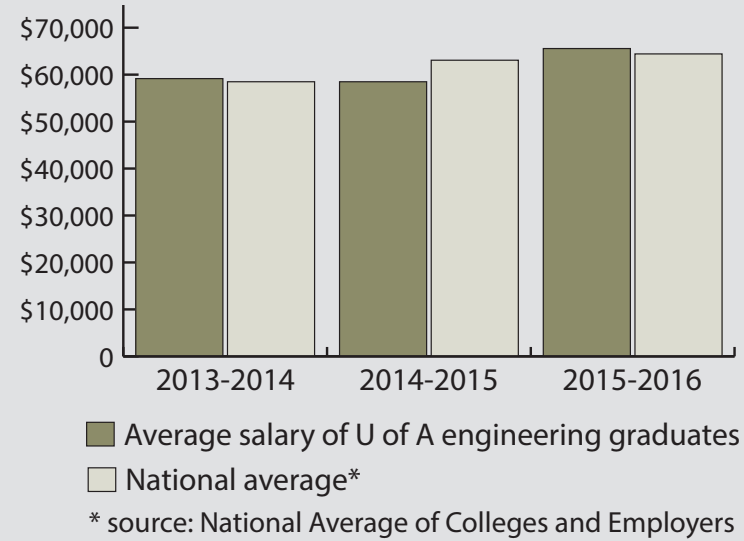
- We will continue our outreach to Arkansas K-12 schools with increasingly excellent STEM programming to interest young people in engineering careers and to enhance the number of students pursuing STEM disciplines.
- We are working to create more endowed scholarships to support engineering undergraduates who have financial need.
- We hope to establish more doctoral fellowship endowments to recruit graduate students and provide our faculty with excellent assistants in their research.
- We plan to increase scholarships for juniors and seniors who display exceptional leadership and academic qualities.



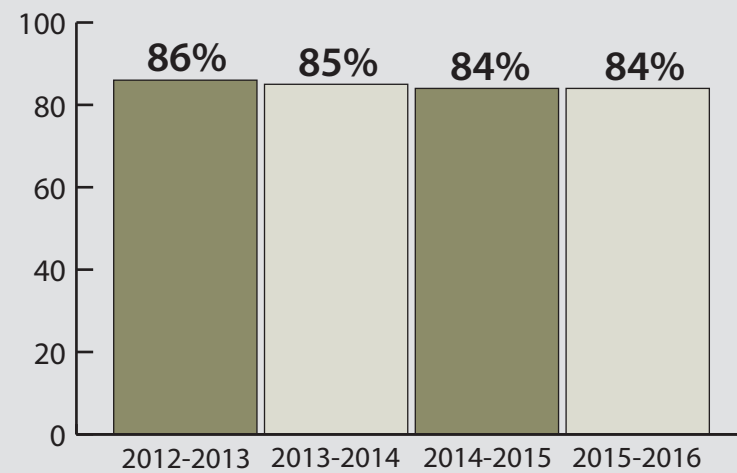
SanJuana Mota
Chemical Engineering Student

A Texas native, SanJuana Mota decided to come to the U of A because she “fell in love with the campus.” After spending a summer at the Engineering Summer Academy, a summer camp for high school students hosted by the College of Engineering, Mota knew she wanted to study engineering at the U of A. Mota is currently a junior studying chemical engineering, and she is an Honors College student and a participant in the Engineering Career Awareness Program. Mota has made the most of her time at the U of A. She gained valuable work experience through an internship at the Arkansas Department of Health-Engineering Section, and spent a summer working on water quality monitoring at public water systems.

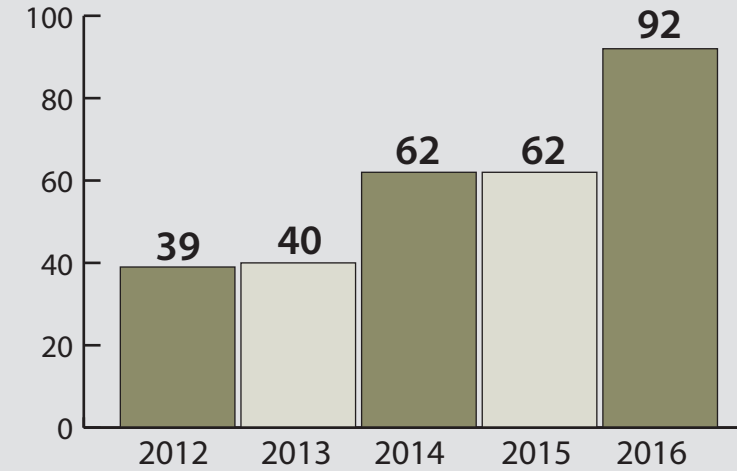
Engineering Graduate Starting Salaries: U of A and National Averages



Engineering Graduate Placement Rate (percentage of graduates employed or attending graduate school)



Number of Engineering Honors College Graduates



Fall 2016 Incoming Student Awards

Bodenhamer Fellows	2
Honors College Fellows	29
National Merit Scholars	26

Recipients of Nationally Competitive Awards and Scholarships

	2012	2013	2014	2015	2016
National Science Foundation Graduate Research Fellowship	4	1	8	1	2
National Science Foundation Graduate Research Fellowship Honorable Mention	2	1	3	3	1
Goldwater Scholarship	1		1		1
Goldwater Honorable Mention				2	1
Whitaker Fellowship			1		
NSF CyberCorps Scholarship for Service			1		
Udall Scholarship				1	
Truman Scholarship					1
Gates Cambridge Scholarship					1



Preparing for Tomorrow:

- Every semester, our STEM Career Fair attracts over 100 employers and over 1,000 students. We also offer networking events and workshops around the event, so that students receive many opportunities to work on their resumes, practice their interview skills and connect with potential employers.
- With endowed funds for colloquia, we invite speakers to campus and create programs for visiting scholars and executives in residence at the university. This exposes our students and faculty to the emerging trends in engineering excellence.

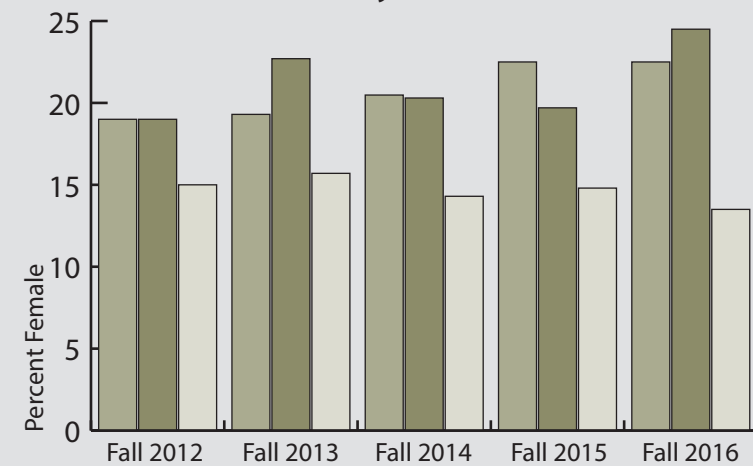


Ikenna EgboSimba
Electrical Engineering Student

"I have always had a passion for how technological devices worked. As a child, I would often take apart old laptops, game systems, and other devices just to see their internal components. As I went through my high school courses, I found a passion within my math and science classes which coincided perfectly with my passion for technology. So I decided to pursue a career out of it and chose to major in electrical engineering at the University of Arkansas.

"I chose the University of Arkansas for a number of reasons but primarily due to the fact that I was a recipient of the Engineering Career Awareness Program scholarship (ECAP). This program single handedly changed my outlook from a collegiate standpoint. I was afforded the luxury of complimentary tuition, housing, meal plan, and the opportunity to interact with other highly intelligent students. This, which I am still very thankful for to this day, was definitely the determining factor in my decision to attend the University of Arkansas."

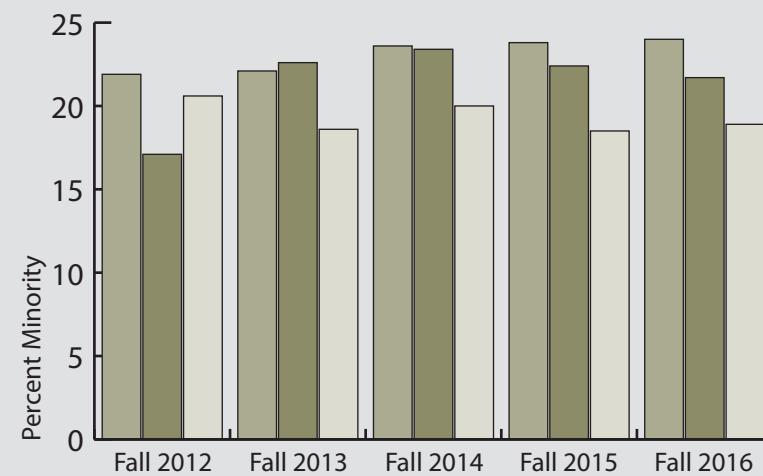
Gender Diversity



■ Undergraduate Students
■ Graduate Students*
■ Faculty**

* Does not include distance students.
** Includes tenured and tenure-track faculty

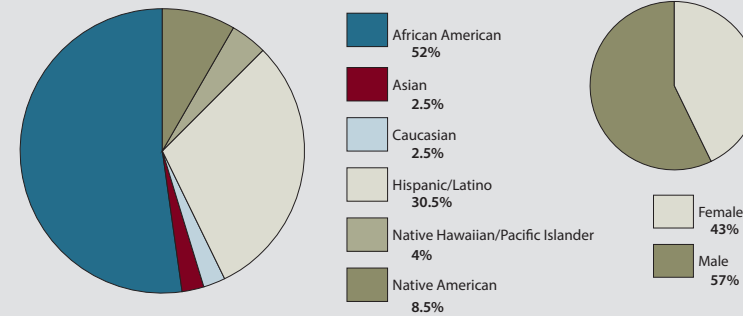
Ethnic Diversity



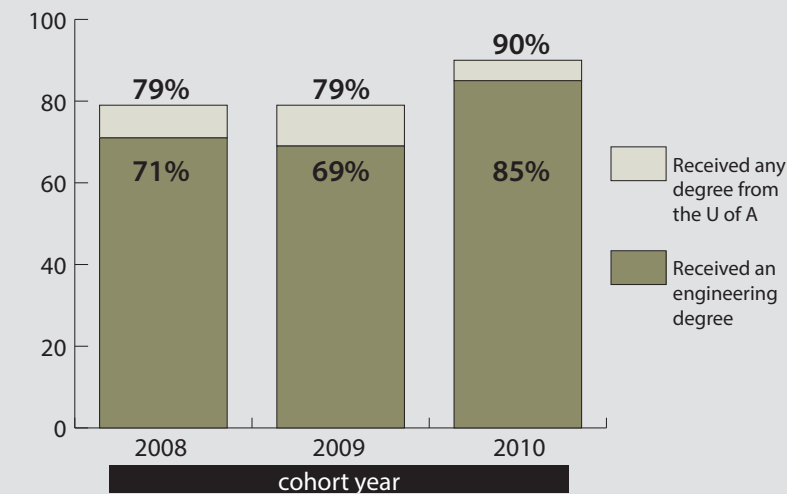
■ Undergraduate Students
■ Graduate Students*
■ Faculty**

* Does not include distance or international students
** Includes tenured and tenure-track faculty

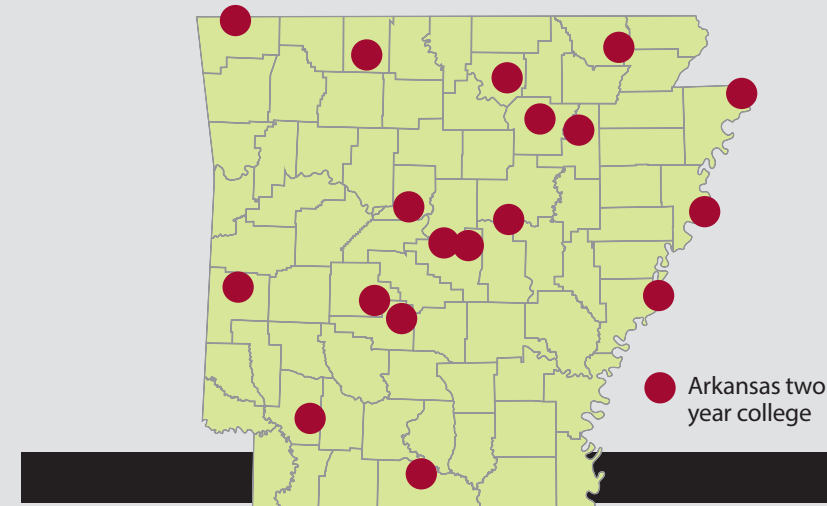
Engineering Career Awareness Program Student Demographics



Engineering Career Awareness Program Six Year Graduation Rate



STEM Preparation Program



We are easing students' transition from two year colleges through the STEM Preparation Program. This program provides online science, engineering and math classes for students enrolled at an Arkansas community college. These classes count toward an associate's degree at the student's community college and a bachelor's degree in engineering, science or math at the University of Arkansas.



The Engineering Career Awareness Program is a recruitment and retention program that removes barriers for underrepresented students to earn engineering degrees.

Preparing for Tomorrow:

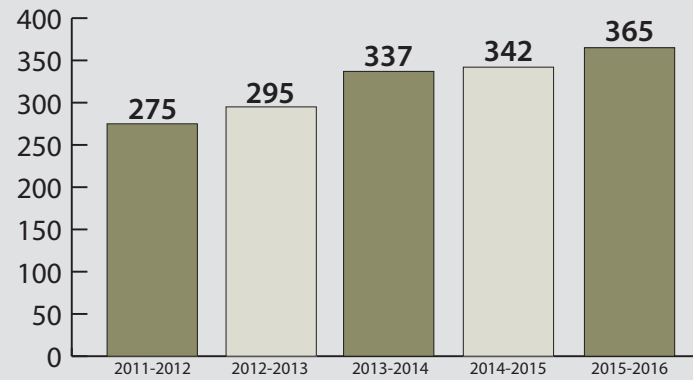
- Our Engineering Career Awareness Program (ECAP) has led to significant increases in students who are underrepresented in engineering. These include first generation college students, women and minorities.
- In order to maintain and expand on this success, we are pursuing significant financial backing for underrepresented students with financial need, so that they have the means to attend the university and earn engineering degrees.



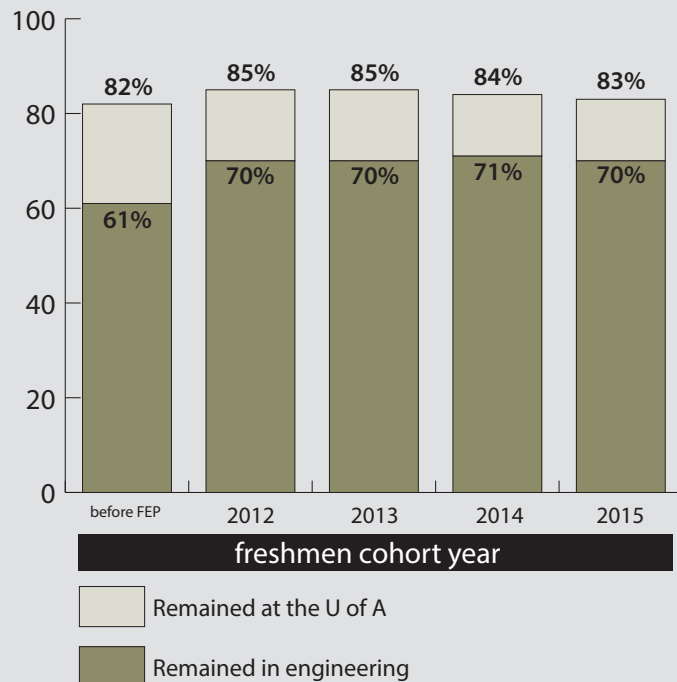
Emily Matlock
2015 Freshman of the Year

"The Freshman Engineering Program was extremely beneficial to my freshman year. Through the peer mentoring program, where freshmen students are paired with an upperclassman engineering student, I felt connected early on and appreciated the guidance that they provided in our weekly meetings. Through the informational sessions, where we learned about each discipline, I was able to make a confident and educated decision about which discipline I wanted to study. These sessions truly make a difference as evidenced by my changing my choice of disciplines. The faculty were always open and supportive, and we had the benefit of having a faculty mentor help us with our research throughout the year. Because of the Freshman Engineering Program, I feel sufficiently ready for my future academic career."

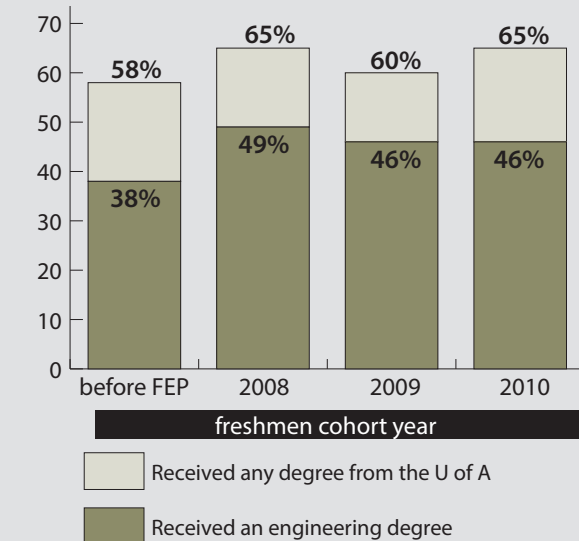
Experiential Learning
(students who participated in cooperative education, undergraduate research or study abroad)



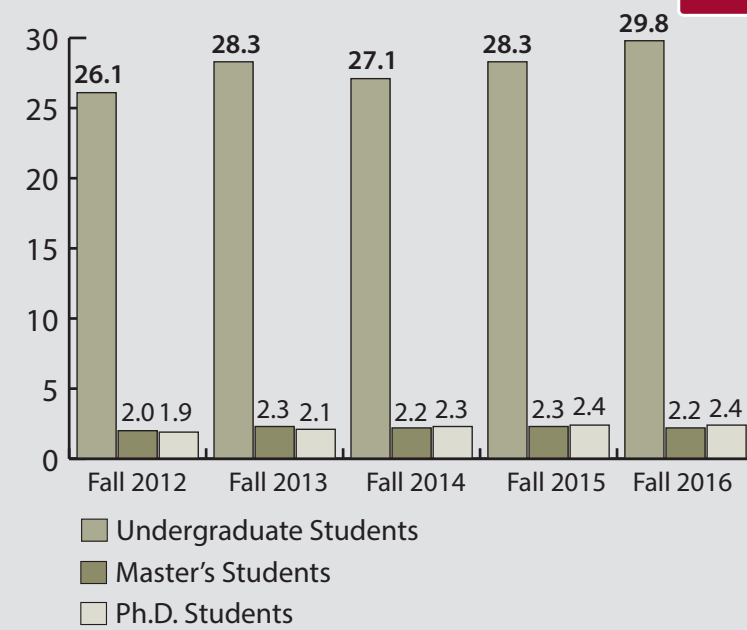
First Year Retention Rate



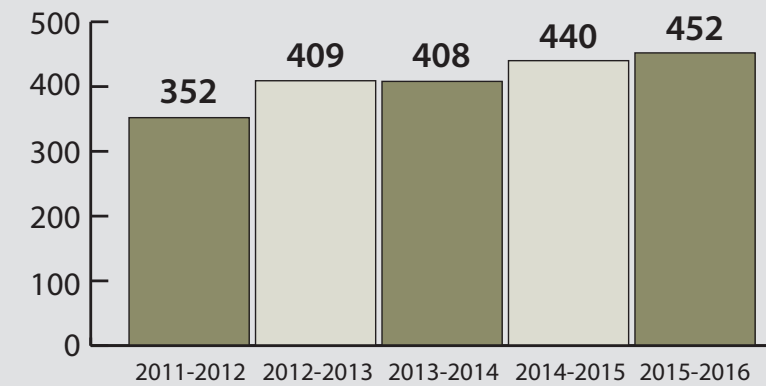
Six Year Graduation Rate



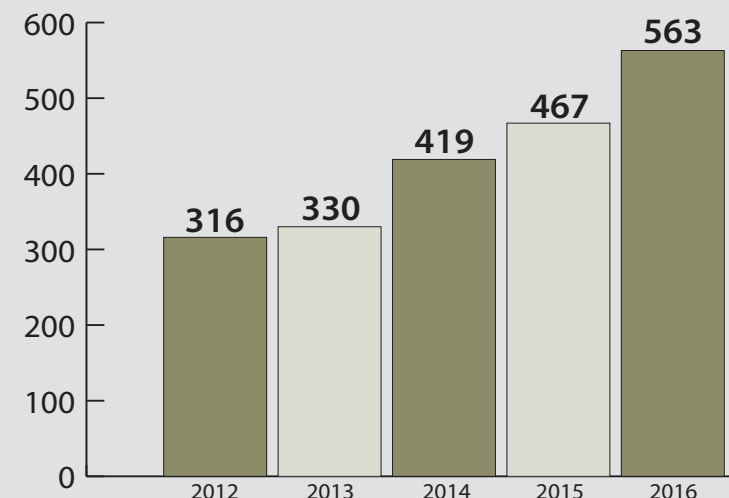
Student-Faculty Ratio



Student Semester Credit Hours per Faculty Full Time Equivalence



Bachelor's Degrees Awarded



Preparing for Tomorrow:

- In order to cement our success in retaining and graduating engineers, we are seeking to endow the Freshman Engineering Program so that it is assured support in perpetuity.
- We plan to continue to connect successful alumni with our students through classroom presentations, mock interviews, industry visits and other activities.

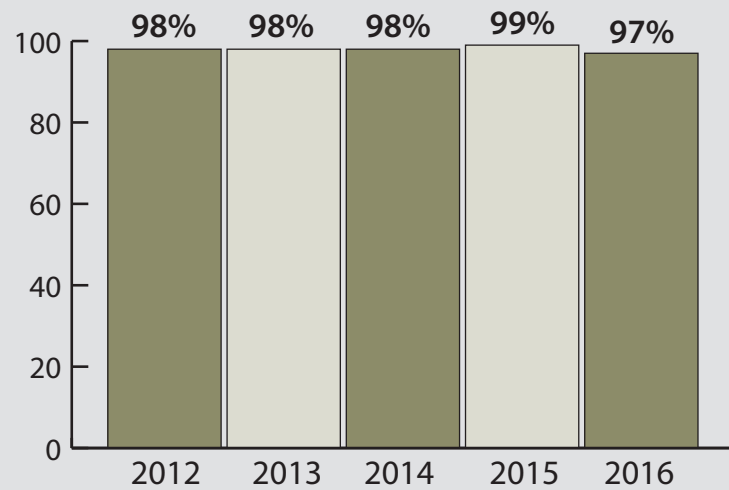


Dale Thompson
Associate Professor of Computer Science and Computer Engineering
Recipient of the 2016 John Imhoff Award for Teaching

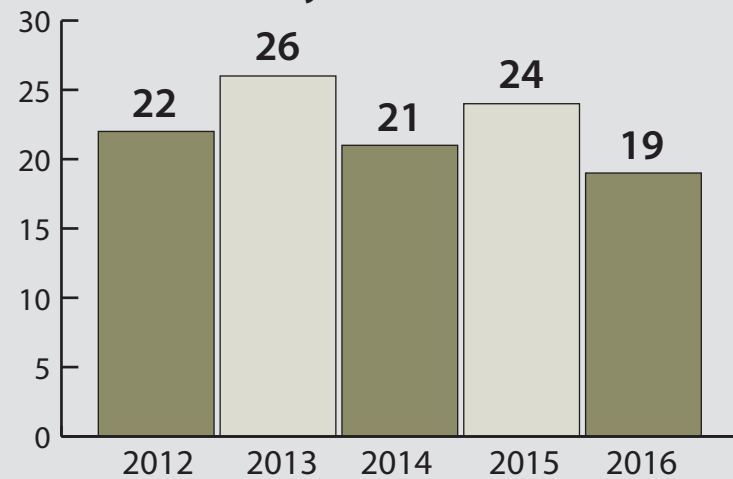
Dale Thompson serves on his department's undergraduate curriculum committee and on the College of Engineering Distance Education Committee for the MSE program. In addition, he performs a significant amount of teaching and service for the department, serving as the ABET Coordinator since 2007. The computer science and computer engineering department went through ABET assessment successfully under his leadership.

Thompson recently received a significant grant from the National Science Foundation for a project called Training Arkansas Computing Teachers, which provides access to computer science instruction for high schools. This program has a goal of training at least 50 Arkansas high school teachers to become certified to teach computer science in the next three years.

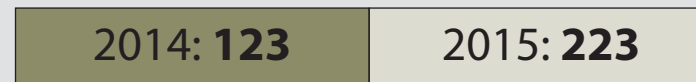
Faculty Retention



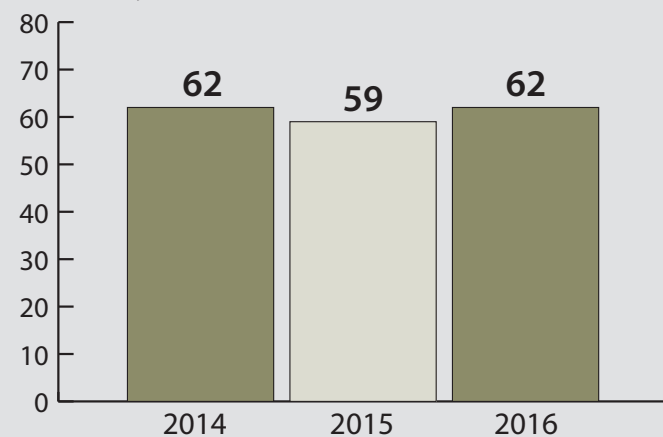
National Faculty Awards Received



Professional Service Leadership
(number of external leadership positions held by faculty)

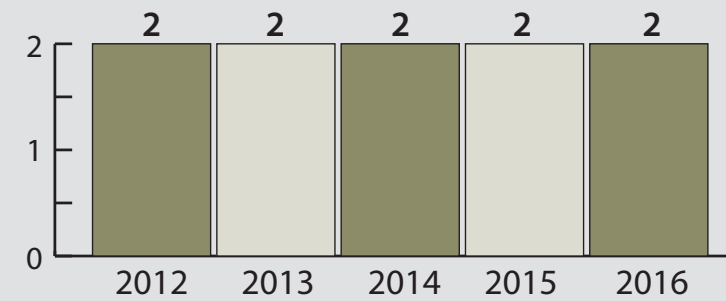


Society Fellows*

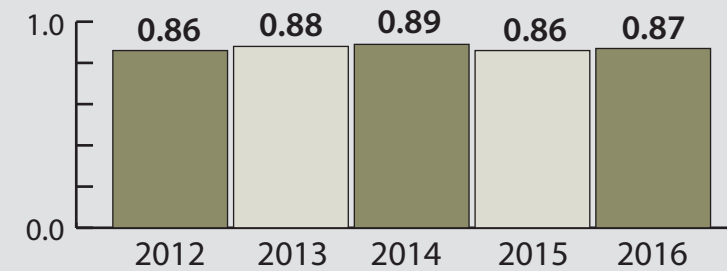


* For a complete list of fellows, see Appendix page 39

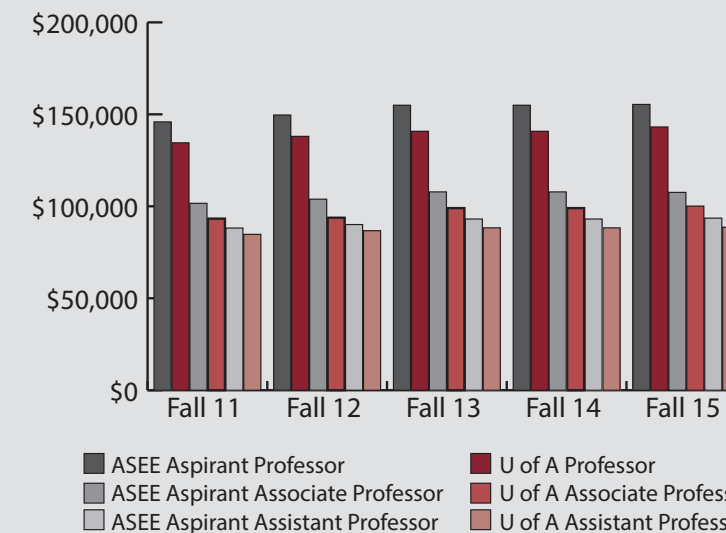
Membership in the National Academy of Engineering



Staff-Faculty Ratio



U of A and American Society for Engineering Education (ASEE) Average Faculty Salary Comparisons*



* ASEE salary survey data for fall 2016 is not available until January. Instructor salaries are not benchmarked in the ASEE salary survey.



Ashlea Milburn, assistant professor of industrial engineering, received a grant through the National Science Foundation's Faculty Early Career Development program, known as the CAREER award, to support her research on the role social media can play in disaster relief.



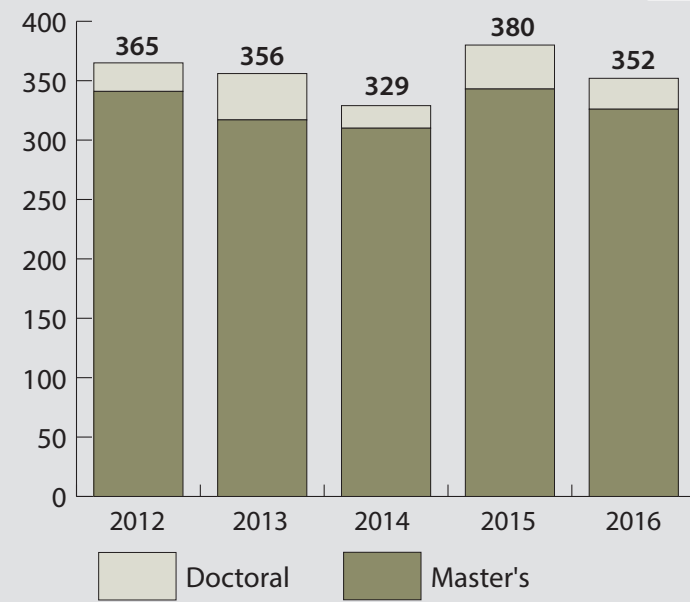
Matthew Patitz, assistant professor of computer science and computer engineering, also received a CAREER award to support his work analyzing DNA-based self-assembling systems.



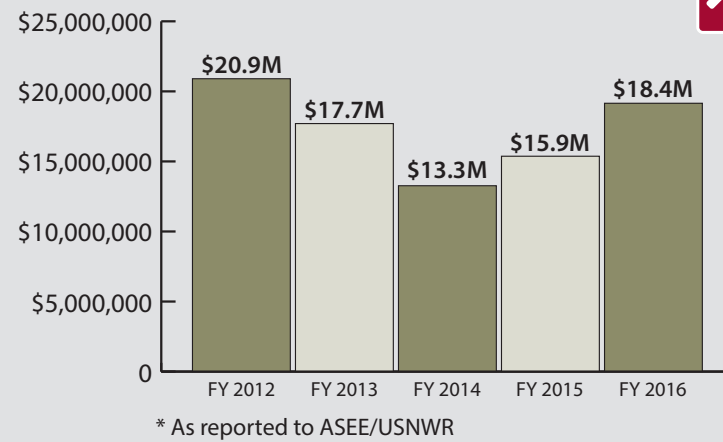
Heather Nachtmann
Associate Dean for Research
Professor of Industrial Engineering

"Engineers have always been on the front lines of discovery and innovation, and as part of a land-grant research university, the College of Engineering has a special responsibility to provide knowledge and innovation for the state of Arkansas and beyond. In recent years, the College of Engineering has defined and prioritized our research strengths, and this emphasis has led to growth in our research activity. The College also encourages interdisciplinary and collaborative research, and many of our research centers bring together faculty from different disciplines."

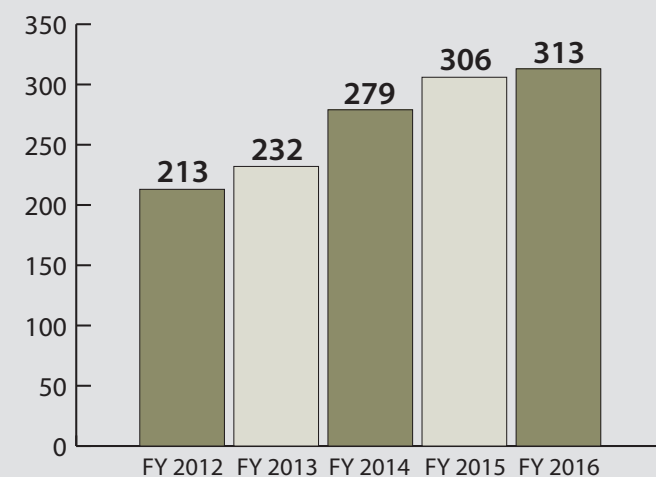
Advanced Degrees Awarded



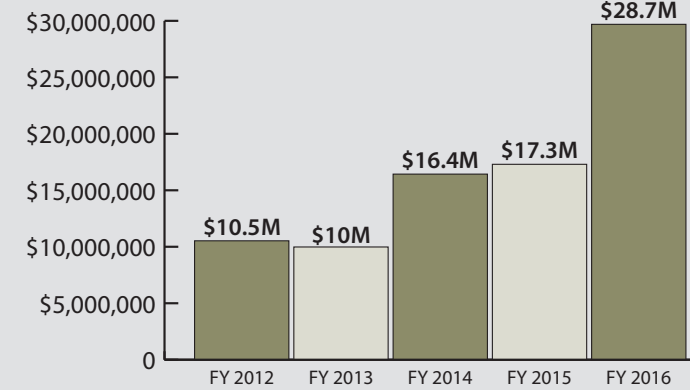
Total Research Expenditures*



Research Proposals Submitted



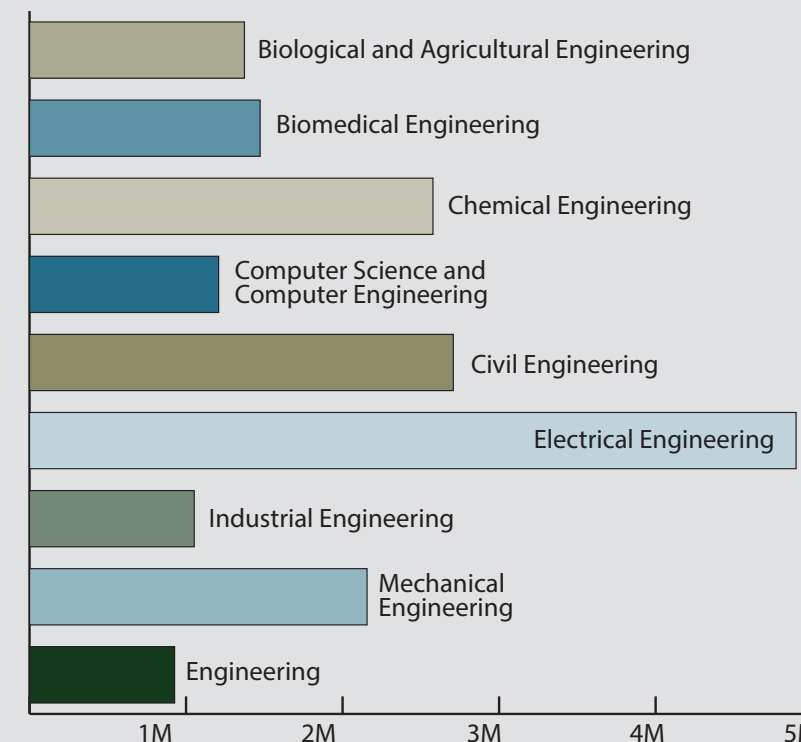
New Research Grants Received



Peer-Reviewed Publications



Research Expenditures by Department (FY 2016)



Jin-Woo Kim, professor of biological and agricultural engineering, received the 2016 College of Engineering Most Engaging Research Faculty Award based on his research in self-assembling nanostructures.



Alan Mantooth, Distinguished Professor of electrical engineering, holder of the Twenty-First Century Research Leadership Chair and Arkansas Research Alliance fellow. Mantooth received the 2016 John L. Imhoff Award for Research.

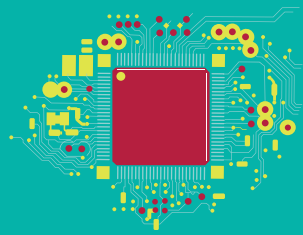
Preparing for Tomorrow:

- We plan to recruit innovative faculty through endowed chairs in the top five areas of research strength and the 10 emerging research areas.
- We would also like to establish incentive funds for faculty who pursue innovative research.

EXISTING strengths

In January 2014, a research task force appointed by dean John English identified existing and emerging strengths in the college. Existing strengths are those areas where the college is already nationally recognized. Emerging areas are fields where the college has some key presence, expertise and momentum. These are expected to emerge into strengths with additional investment. The full report can be found at <http://engineering.uark.edu/about-us/strategic-plan/research-strategy.php>

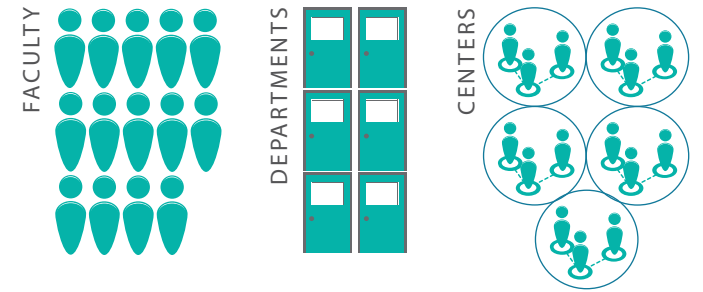
EMERGING areas



Electronics

The College of Engineering has been producing graduates focused on electronics for over 30 years. Researchers in this area are developing new materials for circuits and photovoltaic cells, designing and modeling circuits, creating packages that protect and integrate electronic devices, and creating and testing new technologies to improve our power grid.

- Centers in this area include High Density Electronics Center, the Institute for Nanoscience and Engineering, Grid-Connected Advanced Power Electronics Systems and the National Center for Reliable Electronic Power Transmission
- Over \$5 million per year in research expenditures
- Several startup companies have emerged from this area



Energy

The broad area of energy has a foundation in electronics, but has expanded to include power systems, energy storage, smart grid innovation, biofuels, and oil and gas research. As the world struggles to find and integrate safer and more sustainable sources of energy, research in this field is more important than ever.

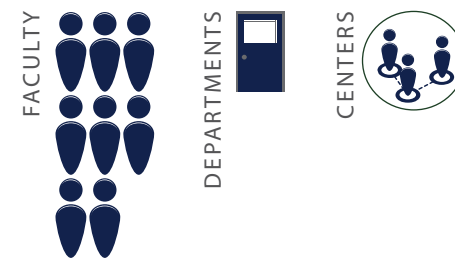
- The GRAPES and NCREPT centers are focused on energy research, with research expenditures of \$2 million per year
- Biofuel research in chemical and biological engineering is supported by the National Science Foundation, the Department of Energy and the Department of Transportation
- Combining electronics and non-electronics energy research could lead to the development of future research centers



Healthcare Systems Engineering

This research area focuses on reducing costs and improving quality in the healthcare industry by optimizing the way supplies and therapies are administered. Researchers look at many different aspects of the healthcare industry, including supply chain costs, medical decision making, therapy scheduling, statistical monitoring and detection of epidemics.

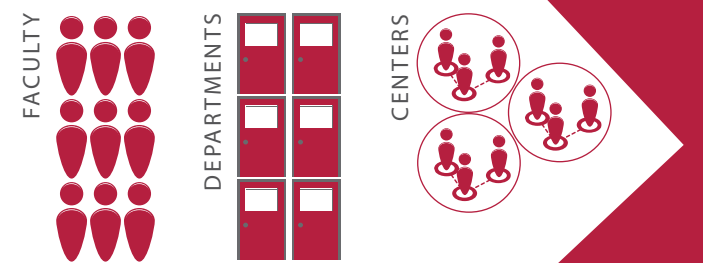
- Much of the research in this area is conducted through the Center for Innovation in Healthcare Logistics (CIHL)
- CIHL has had \$3 million in research expenditures over the past 5 years
- Researchers in this area collaborate with industry and share findings with the healthcare community



Nanomaterials Science and Engineering

The nanotechnology area has existed for about 15 years. Researchers in this area use computational modeling to design and model novel nanoscale materials, synthesize them, integrate them into devices and device packaging, create advanced nanomaterial coatings, use nanoscience to improve photovoltaic and thermoelectric technologies and study biological materials on the nanoscale in order to create new bio-inspired surfaces and materials.

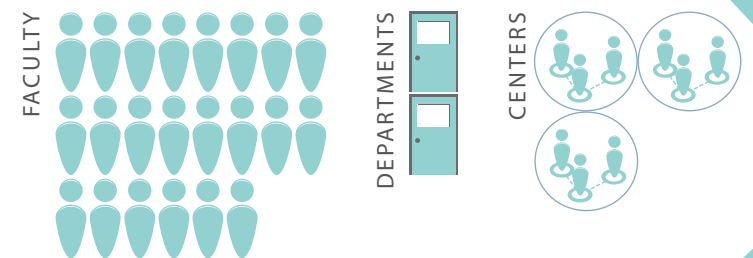
- Nanomaterials research is conducted at the Institute for Nanoscience and Engineering and supported by micro-fabrication facilities at HiDEC and in labs throughout the college
- Annual research expenditures for the college in this area are approximately \$2 million per year
- Companies such as the award-winning NanoMech, co-founded by a faculty member in mechanical engineering, are demonstrating successful tech transfer in this area



Transportation and Logistics

The College of Engineering has been a national leader in transportation and logistics for more than twenty years. Researchers are looking at distribution, transportation, information technology and software solutions, and maritime and multimodal transportation.

- Centers include the Center for Excellence in Logistics and Distribution and the Mack-Blackwell Rural Transportation Center
- Research expenditures total approximately \$2 million per year
- The college works closely with the Arkansas State Highway and Transportation Department and many other transportation stakeholders across the nation



Aerospace

The U of A is moving to respond to this area, which is the single largest export market from the state of Arkansas.

Big Data Analytics

Technology has increased the amount of data we produce, leading to an increased need to analyze this data.

Cybersecurity

Researchers are looking at increasing security, especially in the areas of ports, transportation and the power grid.

Healthcare

With the new biomedical engineering department, the college is poised to marry technical and biological research in this area.

Infrastructure

As a land-grant institution, the U of A has a responsibility to maintain the nation's water and electric resources, communications and transportation.

Materials and Manufacturing

Keeping manufacturing jobs in America and maintaining our competitiveness in this area is key for economic growth.

Optoelectronics

This field is emerging from the broader field of electronics. It involves new semiconductor materials, biophotonics and photovoltaics.

Sustainability

Faculty across the college are engaged in some form of research involving sustainable practices, design or technologies.

Systems Integration

This area encompasses research in automation, robotics and systems and process control, and inspires keen interest in our students.

Water

Research in this area includes water quality, wastewater treatment and watershed management.

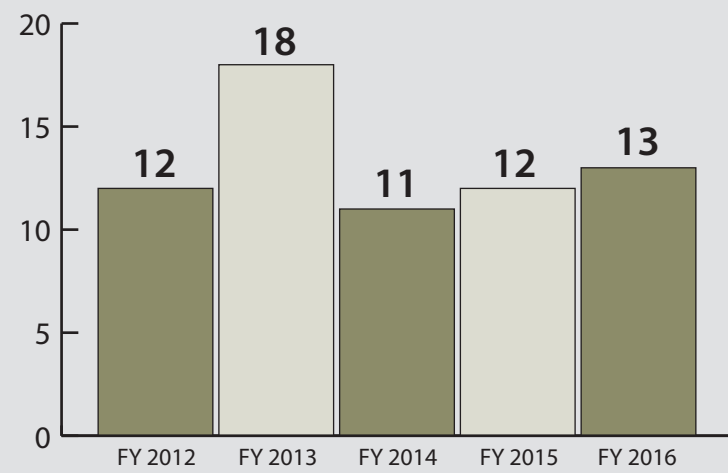


Corey Thompson
Ph.D. 2014
CEO, WattGlass

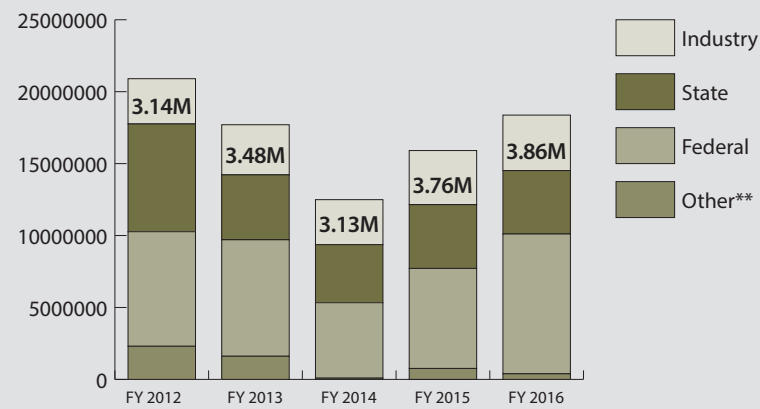
Corey Thompson, Ph.D. 2014, founded the company WattGlass in 2014 to commercialize technology he developed through his doctoral research under Min Zou, professor of mechanical engineering at the U of A. The technology allows WattGlass to deposit a high performance antireflective coating using water-based chemistry that is cheaper than current alternatives, while also providing a self-cleaning and anti-fog surface that has applications in solar and other markets.

In September 2016, the U.S. Department of Energy awarded \$679,413 to WattGlass through the SunShot Initiative. The award will help commercialize the University of Arkansas' patent-pending coating technology that makes glass anti-reflective, self-cleaning and highly transparent. WattGlass is affiliated with the Arkansas Research and Technology Park, an innovation hub that works in association with the university to commercialize emerging technologies.

Invention Disclosures



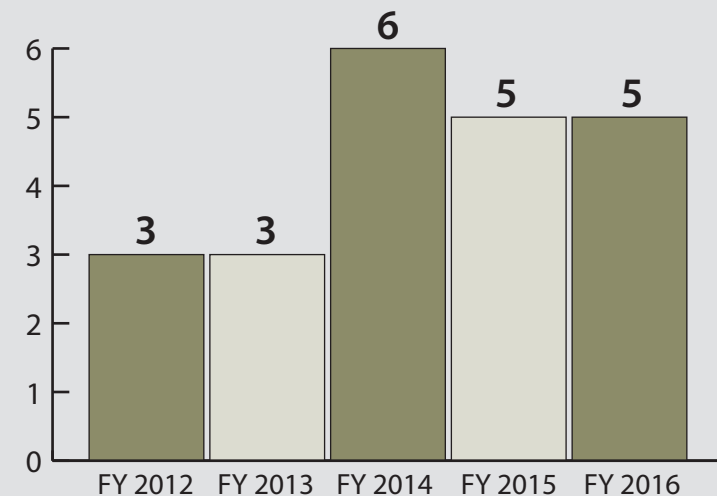
Research Expenditures by Source*



* As reported to ASEE/USNWR

** Other category includes: foreign governments, foundations, other non-governments

Patents Awarded



College of Engineering Startup Companies

Since 1990, 24 companies have been created based on engineering research at the U of A.



Preparing for Tomorrow:

- We plan to encourage faculty development in entrepreneurship, by providing opportunities such as commercial concept testing, academics in residence positions in industry, economic development initiatives and community service.

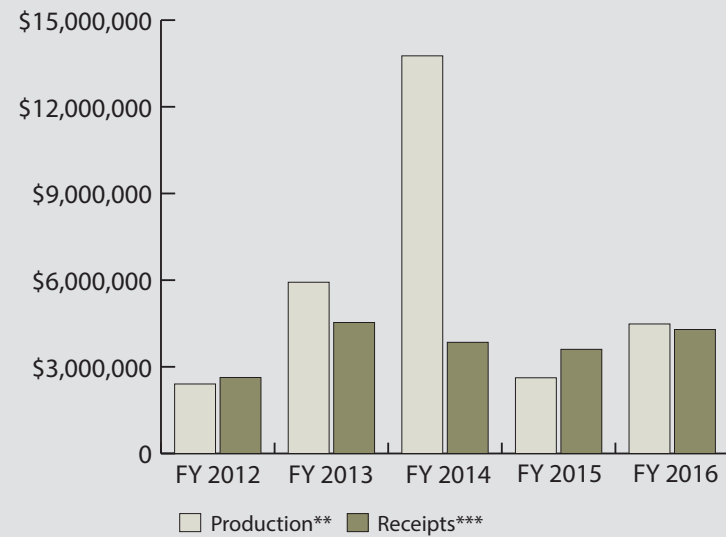




Bob Storey
B.S.Ch.E. 1980
Principal, The MVR Company
Chairman of the Engineering Dean's Advisory Council

"The inspirations of faculty and mentors were the sparks that may have ignited many of our careers, but for me, the U of A and the College of Engineering impacted my life in ways that I didn't fully appreciate until much later in my career. I now see fundamental building blocks, attitudes, and lifetime outcomes that were a result of those experiences – some perhaps accidentally attained – but many as a result of the caring guidance from those that came before us. Our roles as alumni are to help fan those innovative flames in the next generation – in any way that the gifts bestowed upon us allow. We may encourage, we may challenge, we may inspire – but we must always be there to support."

Philanthropic Giving*

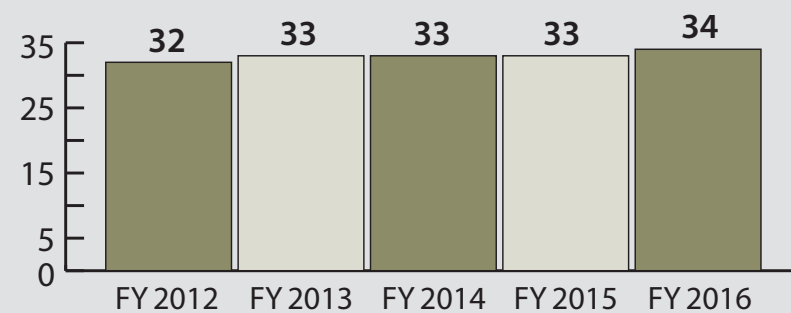


* For more information, see Gifts and Endowments chart on Appendix page 37.

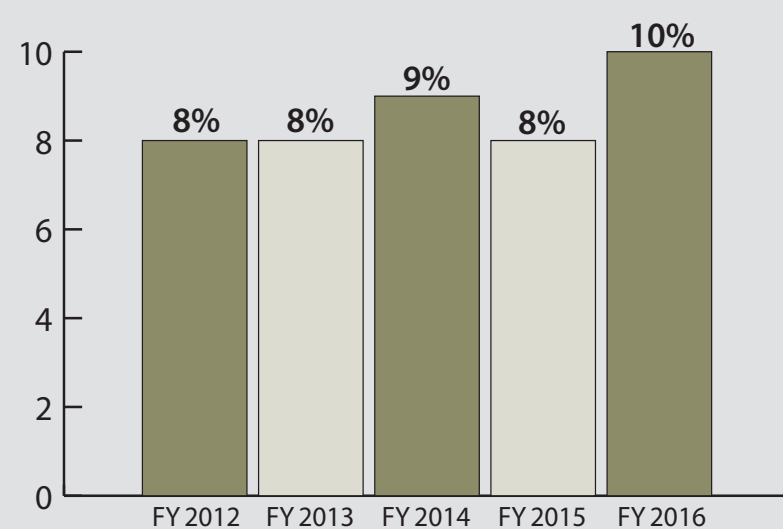
** Production: new gifts received or pledged during the fiscal year, including payments that will be received in future years.

*** Receipts: gifts received during the fiscal year, including payments on pledges from prior fiscal years.

Endowed Faculty Positions



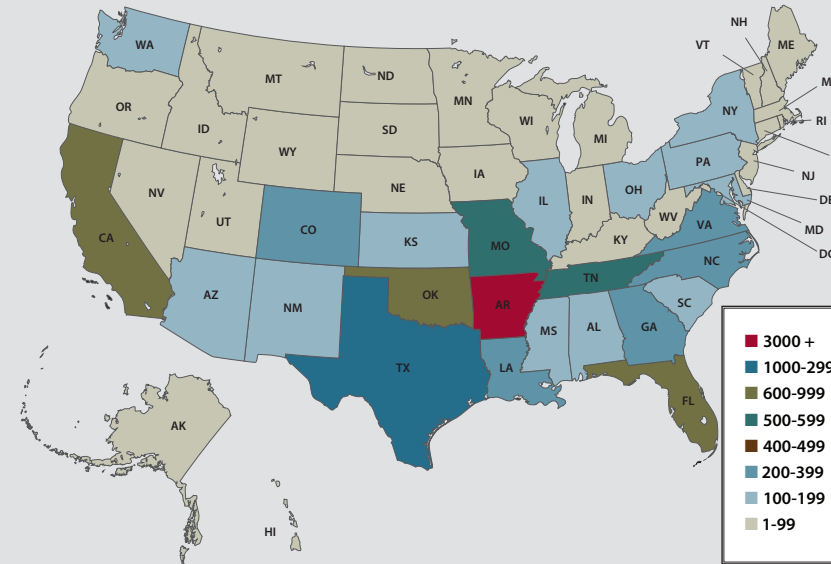
Percentage of Alumni Who Give



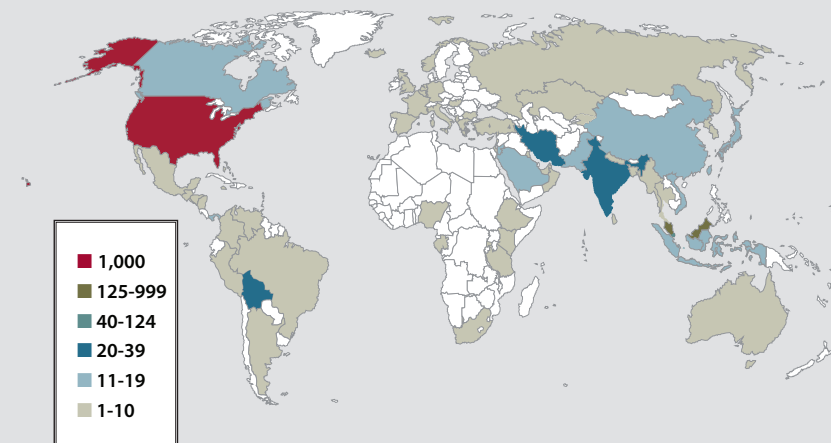
Endowed Scholarships and Fellowships

2016: 133

Alumni By State



Alumni By Country



2016 Hall of Fame Award

- Troy C. Alley, Jr., B.S.E.E. 1969, executive vice president and chief operating officer, Con-Real Inc.
- David D. Foust, B.S.I.E. 1964, vice president and general manager of the Americas (retired), Bakaert
- Stanley Reed, B.S.A.E. 1973, JD 1976, owner, Reed Family Farm (posthumous)

2016 Distinguished Alumni Award

- Sharon Booth McGee, B.S.Ch.E. 1987, M.S.Ch.E. 1988, vice president, corporate development and strategy, Albemarle Corp.
- David Humphrey, B.S.I.E. 1982, M.S.I.E. 1983, vice president of investor relations, ArcBest Corp.
- Michael D. Jones, B.S.Ag.E. 1967, M.S.Ag.E. 1968, principal, PQR Inc. (retired)
- Jerry W. Martin, B.S.C.E. 1967, M.S.C.E. 1968, chair, Engineering Services Inc. (retired)
- Jack Murders, B.S.M.E. 1986, vice president of Arkansas facilities, Marshalltown Co.
- Joseph Michael Roblee, B.S.C.S.E. 1990, chief information officer, U.S. HealthRecord Inc.
- Jon Michael Russ, B.S.M.E. 1986, director of power delivery, Arkansas Electric Cooperative Corporation

2016 Early Career Award

- Keith Britton, B.S.C.E. 1997, M.S.C.E. 1999, chief executive officer, Iconic Consulting Group Inc.
- Jared Hornberger, B.S.E.E. 2002, M.S.E.E. 2005, Ph.D. 2012, director of manufacturing, Cree Fayetteville Inc.
- Steven M. Karp, B.S.C.S.E. 1999, senior systems engineer, Juniper Networks
- Matthew C. Loach, B.S.Ch.E. 1996, financial planning manager, ExxonMobil Chemical Co.
- Kevin Oden, B.S.I.E. 2007, M.B.A. 2011, partner, ImPro Advisors
- Chris Pixley, B.S.B.A.E. 2002, Ph.D. 2013, head of production, Novozymes



Renovated Space

	Academic	Research
2016	6,420 ft ²	14,449 ft ²
2015	5,236 ft ²	8,200 ft ²

Renovation Investment

	Academic	Research
2016	\$229,500	\$430,500
2015	\$546,000	\$304,000

Total Space

	Academic	Research
2016	84,229 ft ²	102,067 ft ²
2015	77,416 ft ²	92,272 ft ²



Preparing for Tomorrow:

- The college plans major renovations to John A. White, Jr. Engineering Hall. This historic building has housed engineering classes and labs since 1927. We plan to upgrade the space and create a classic interior that pays homage to the building's rich history.
- Construction of the Civil Engineering Research and Education Center will provide research space for structures analyses and allow the Department of Civil Engineering to remain regionally competitive.



Appendix

Revenues (excluding gifts)

	FY 2012		FY 2013		FY 2014		FY 2015		FY 2016	
State Appropriations & Tuition	\$18,231,900	40.16%	\$20,117,970	46.86%	\$20,787,672	48.42%	\$21,712,044	45.81%	\$22,948,204	48.42%
Distance Learning Revenues, Ft Smith, Service Centers, Conferences	\$3,606,851	7.95%	\$3,335,980	7.77%	\$3,103,014	7.23%	\$3,140,177	6.63%	\$3,325,452	7.02%
Research Incentive Funds	\$1,714,543	3.78%	\$1,635,454	3.81%	\$1,643,657	3.83%	\$942,325	1.99%	\$1,077,827	2.27%
Biological Engineering Teaching and Agricultural Experiment Station*	\$1,758,085	3.87%	\$1,947,726	4.54%	\$1,787,000	4.16%	\$1,851,719	3.91%	\$1,893,397	4.00%
Sponsored Research**	\$16,005,505	35.26%	\$14,930,781	34.78%	\$11,805,030	27.49%	\$15,907,692	33.57%	\$18,372,457	38.77%
Sponsored Activities and Scholarships	\$1,718,175	3.78%	\$1,336,218	3.11%	\$1,518,160	3.54%	\$1,537,123	3.24%	\$1,658,126	3.50%
Student Equipment Fee Revenues (TELE-net)	\$1,767,505	3.89%	\$2,092,715	4.87%	\$2,286,709	5.33%	\$2,302,119	4.86%	\$2,436,534	5.14%
Total	\$44,802,564		\$45,396,844		\$42,931,241		\$47,393,199		\$51,711,996	

* Cooperative Extension Service not included.

** As reported to ASEE and USNWR.

Expenditures (excluding gifts)

	FY 2012		FY 2013		FY 2014		FY 2015		FY 2016	
Salary and Benefits	\$16,248,982	30.71%	\$16,572,659	31.95%	\$17,363,641	34.19%	\$18,744,220	36.95%	\$18,211,503	35.70%
Operating Expenditures	\$1,828,291	3.46%	\$2,751,265	5.30%	\$2,615,636	5.15%	\$1,301,172	2.56%	\$1,149,449	2.25%
Dept Restricted Fees/Misc	\$2,385,329	4.51%	\$2,466,727	4.76%	\$2,773,673	5.46%	\$1,239,293	2.44%	\$1,121,038	2.20%
Student Equipment Fees	\$1,786,399	3.38%	\$1,606,694	3.10%	\$2,122,512	4.18%	\$2,241,529	4.42%	\$2,082,936	4.08%
Scholarships	\$369,645	0.70%	\$302,547	0.58%	\$1,193,379	2.35%	\$758,241	1.49%	\$482,364	.95%
Research*	\$25,116,772	47.48%	\$23,972,316	46.22%	\$20,729,821	40.81%	\$22,476,266	44.30%	\$27,966,133	54.82%
Total	47,735,418	90.23%	\$47,672,208	91.91%	\$46,798,662	92.14%	\$46,760,722	92.17%	\$51,013,423	100%

* Reported and compiled by the U of A Research Accounting Office and submitted to NSF.

Gifts and Endowments*

Revenue	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Contributions - Expendable	\$1,222,770	\$2,709,746	\$1,126,807	\$871,121	\$1,390,103
Contributions - Endowed & Restricted Gifts	\$956,115	\$1,072,257	\$5,238,427	\$3,620,544	\$1,303,521
Investment Income:					
Expendable	\$2,133,632	\$2,322,307	\$2,577,659	\$2,617,325	\$2,816,073
Endowed (reinvestment)	\$1,090	\$1,042	\$0	\$0	\$0
Endowed Market Value Adjustment	(\$1,170,897)	\$4,133,111	\$6,979,898	(\$298,852)	(\$4,280,657)
Net Transfers and Allocations	\$33,732	\$13,743	(\$1,224,342)	\$0	\$0
Total Revenue	\$3,176,442	\$10,252,206	\$14,698,448	\$6,810,138	\$1,229,041
Expenditures	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Scholarships and Student Support	\$1,017,287	\$1,119,101	\$1,154,870	\$836,285	\$621,766
Other College Support	\$3,576,456	\$2,574,873	\$2,272,358	\$2,154,828	\$2,002,086
Capital Outlays	\$108,988	\$152,525	\$218,170	\$72,484	\$187
Development costs**	\$466,370	\$350,435	\$347,631	\$391,743	\$131,177
Total Expenditures	\$5,169,101	\$4,196,934	\$3,993,030	\$3,455,340	\$2,755,216
Revenues less Expenditures	(\$1,992,659)	\$6,055,272	\$10,705,419	\$3,354,798	(\$1,526,175)

* Planned and Charitable Remainder Trust Accounts are not reported.

** Development costs budgeted from U of A Foundation funds and includes administrative overhead charges to gift revenues.

Gifts and Endowments Financial Position*

Endowment Funds Held with the University of Arkansas Foundation, University of Arkansas, and Agricultural Development Council

	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Cash and Cash Equivalents - Expendable	\$8,245,875	\$9,411,703	\$8,219,552	\$11,335,354	\$12,807,764
Pooled Investment Funds - Endowments	\$42,994,532	\$46,329,354	\$55,042,921	\$52,222,964	\$52,164,081
Scholarship Endowments	\$8,284,086	\$9,643,672	\$12,348,260	\$14,376,759	\$13,770,926
Fellowship Endowments	\$2,983,974	\$3,305,901	\$3,785,316	\$3,991,624	\$4,292,359
Total Fund Balances	\$62,508,467	\$68,690,630	\$79,396,049	\$81,926,701	\$83,035,131

* Planned / Charitable Remainder Trust Accounts are not reported. Biological Engineering accounts retroactively reported with Engineering.

Distance Education

The Master of Science in Operations Management program was established in 1974 and since that time it has become the largest graduate degree program offered by the University. The purpose of the program is to create value through efficiency by applying the strategic, tactical and operational activities of operations management. The program offers classes at several graduate resident centers across the region. Students may complete all the requirements for the program at one of these centers, at the Fayetteville campus, or online.

Master of Science in Operations Management		
Year	Number of Courses Offered	Student Credit Hours
2012	28	9,669
2013	28	8,943
2014	29	8,994
2015	30	9,537
2016	31	9,243

The Master of Science in Engineering program has been offering online degrees since 2009. It is a fully-accredited program taught by graduate faculty from the College of Engineering. This program is designed for students who want to further their education in a variety of engineering topics, and its graduates are well-prepared for a career in engineering and management of engineering systems, processes and organizations.

This program is consistently ranked in the top 30 for best online graduate engineering programs and best online graduate engineering programs for veterans by *U.S. News & World Report*.

Master of Science in Engineering		
Year	Number of Courses Offered	Student Credit Hours
2012	59	609
2013	61	957
2014	62	1,116
2015	65	1,182
2016	67	1,677

Faculty Elected as Fellows of Professional Societies

National Academy of Engineering

Mike Johnson
John White

ASM International

Ashok Saxena
Ajay Malshe

ASHRAE

Darin Nutter

American Concrete Institute

Frances Griffith
Micah Hale

American Institute for Medical and Biological Engineering

D. Keith Roper
Lalit Verma

American Society for Engineering Education

Norman Dennis
Kim Needy
John White

American Society for Engineering Management

Heather Nachtmann
Kim Needy

American Society for Testing and Materials

Ashok Saxena

American Institute of Aeronautics and Astronautics

Jim Rankin

American Society of Agricultural and Biological Engineers

Lalit Verma
Yanbin Li
Otto Loewer

American Institute of Chemical Engineers

Robert Babcock
Tom Spicer
Ranil Wickramasinghe

American Society of Civil Engineers

Norman Dennis
Findlay Edwards
Ernie Heymsfield
Mike Johnson
R. Panneer Selvam

American Society of Mechanical Engineers

Rick Couvillion
Ajay Malshe
Steve Tung
Min Zou

Arkansas Research Alliance

Alan Mantooth
Min Zou

City and Guilds of London Institute (UK)

Simon Ang

Electrochemical Society

Simon Ang

Indian Society of Agricultural Engineers

Lalit Verma

Institute for Operations Research and Management Sciences

Greg Parnell
John White

Institute of Biological Engineering

Lalit Verma

Institute of Electrical and Electronics Engineers

Simon Ang
Samir El-Ghazaly
Alan Mantooth

Institute of Engineering and Technology (UK)

Simon Ang
Omar Manasreh

Institute of Industrial and Systems Engineers

Richard Cassady
John English
Joseph Geunes
Heather Nachtmann
Kim Needy
Edward Pohl
Manuel Rossetti
John White

International Academy of Production Engineering

Ajay Malshe

International Congress on Fracture

Ashok Saxena

International Council on Systems Engineering

Greg Parnell

Lean Systems Society

Greg Parnell

Military Operations Research Society

Greg Parnell

National Academy of Construction

Mike Johnson

National Academy of Inventors

Hameed Naseem

Society of American Military Engineers

Mike Johnson

Society for Decision Professionals

Greg Parnell

Society of Reliability Engineers

Richard Cassady
Edward Pohl

Society of Tribologists and Lubrication Engineers

Min Zou

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Principal Director, The MVR Company
Managing Directory, VIC Technology Venture Development

Troy Alley
Executive Vice President and COO
Con-Real, Inc.

Greg Baltz
Founder and President
Running Lake Farms

Bami Bastani
Senior Vice President
Radio Frequency Business Unit
GLOBALFOUNDRIES

Sherman Black
CEO
Conservis Corporation

Kevin Brown
Executive Vice President, Manufacturing and
Refining
LyondellBasell Industries

G. Kent Burnett
Senior Vice President of IT and e-commerce
(retired)
Dillard's Department Stores, Inc.

Ansel Condray
Chairman and Production Director (retired)
ExxonMobil International, Ltd.

Melinda Faubel
Director of External Affairs
AT&T Arkansas

Alan Fortenberry
CEO
Beaver Water District

Kendall Harris
Dean and Professor
Roy G. Perry College of Engineering,
Prairie View A&M University

Bob Harrison
Vice President/Principal
ECCI

Grady Harvell
President
AFCO Steel

David Humphrey
Vice President, Investor Relations and
Corporate Communications
ArcBest Corporation

James "Jon" Keel
Founder and CEO
Improved Results, LLC

Jack King
President and CEO (retired)
Oglethorpe Power Corporation

Rodger Kline
COO (retired)
Axiom Corporation

Vincent Lyons
Global Business Consultant

John Marshall
President and CEO
Coastal Partners, Inc.

Charles "Micky" Mayfield
Sales Vice President
Coriant

James McClelland Jr.
Chairman Emeritus
McClelland Consulting Engineers, Inc.

Pamela McGinnis
President, Global Marketing
Phillips 66

Marji McNeill
Vice President and Director, Compliance and
Ethics
Flint Hills Resources

Adam Monroe
President - Americas
Novozymes

Tom Pierson
Founder and CTO
TAS Energy

Karl Schubert
President and Principal Consultant
TechNova Consulting, LLC

Patrick Schueck
Vice President
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