



College of Engineering

Strategic Initiative to Unleash Creativity

GOAL 1: GUARANTEE AN APPLIED LEARNING OR RESEARCH EXPERIENCE FOR EVERY STUDENT BY EACH ACADEMIC PROGRAM.

Programs with designated experience based learning courses

- Aerospace Engineering (B, M, D)
- Biomedical Engineering (B, M)
- Computer Engineering (B)
- Computer Science (B, M)
- Electrical Engineering (B, M, D)
- Engineering Technology (B)
- Industrial Engineering (B, M, D)
- Manufacturing Engineering (B)
- Mechanical Engineering (B, M, D)

B – Bachelor’s Degree | M – Master’s Degree (Thesis) | D – Doctorate



Hands-on projects to unleash creativity.

Undergraduate students engage industry on design projects. Industry representatives evaluate these and other projects at Engineering Open House.



Students receiving an award from Westar Energy for their capstone design project at Engineering Open House banquet.

GOAL 2: PIONEER AN EDUCATIONAL EXPERIENCE FOR ALL THAT INTEGRATES INTERDISCIPLINARY CURRICULA ACROSS THE UNIVERSITY.

New undergraduate cybersecurity track within Engineering Technology program with support from Barton School of Business.

Together with Business, a new Graduate Certificate in Enterprise Systems and Supply Chain Management.

Together with Center for Entrepreneurship, offered interdisciplinary course ID 752: Product, Service and Process Prototyping.



Introduction to Technology and Innovation offered as a general education course.

GOAL 3: CAPITALIZE SYSTEMATICALLY ON RELEVANT EXISTING AND EMERGING SOCIETAL AND ECONOMIC TRENDS THAT INCREASE QUALITY EDUCATIONAL OPPORTUNITIES.

Expand online course offerings

AE765A CMfgT I	IME255 Engineering Economy
AE765B CMfgT II	IME664 Engineering Management
AE765C CMfgT III	ME250 Materials Engineering
AE765D CMfgT IV	ENGT354 Statistical Process Control
ENGT664 Engineering Project Management	ENGT441 Analysis Decision Process in Technology
	ENGT301 Fundamentals of Engineering Technology

Meet the growing demand for cybersecurity and supply chain workforce

New graduate certificate in Information Assurance and Cybersecurity is a new offering by Electrical Engineering and Computer Science.

New undergraduate concentration in Cyber Security within Engineering Technology program.

In collaboration with Business a new Graduate Certificate in Enterprise Systems and Supply Chain Management.

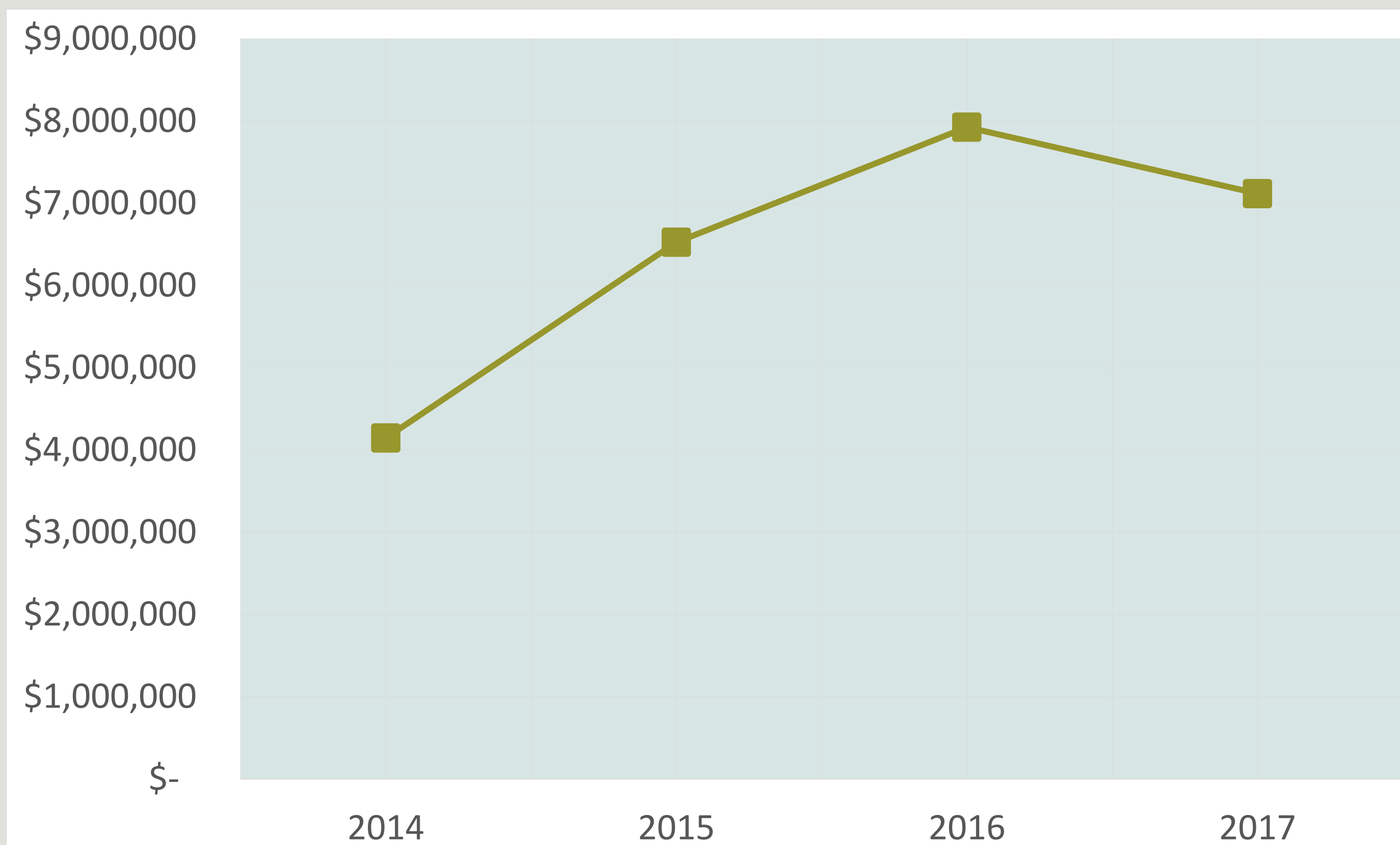
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GOAL 4: ACCELERATE THE DISCOVERY, CREATION, AND TRANSFER OF NEW KNOWLEDGE.

Grew New Award Amounts per Year



Sample FY'17 New Competitive Awards

Principle Investigator	Title	Agency	Award Amount
Cluff, Kim/Miller, Leonard	Novel Smart Skin Biomedical Sensor for Monitoring Crew Health Parameters in a Wireless, Passive, Lightweight, Robust, and Non-Invasive Fashion	Goddard Space Flight Center	\$ 750,000
Chen, Zheng	CAREER: Artificial Muscle Based on Dielectric Elastomers for Dexterous and Compliant Prostheses	Natl Science Foundation	\$ 500,000
Li, Bin	Engineering Plant Proteins to Achieve Dielectric Materials with High Energy Density and High Energy Efficiency	Department of Agriculture	\$ 340,000
Namboodiri, Vinod	REU Site: Enhancing Undergraduate Research Experiences in Networked Cyber-Physical Systems	National Science Foundation	\$ 324,000
Salari, Ehsan	Collaborative Research: Radiotherapy Planning for Real-time Organ Motion Management	Natl Science Foundation	\$ 243,714
Keshavanarayana, Suresh	FAA CSET, CMT, CMfgT and Adhesive Online Courses – Modifications and Implementation	Federal Aviation Administration	\$ 200,000
Jadliwala, Murtuza	EAGER: A Cloud-assisted Framework for Improving Pedestrian Safety in Urban Communities using Crowd-sourced Mobile and Wearable Device Data	Natl Science Foundation	\$ 179,843
Madhavan, Viswanatha	The Extreme Condition Mechanical Testing of AM Materials Using Complementary Methods	Department of Energy	\$ 146,680
Rokhsaz, Kamran	Flight Loads and Airframe Usage Analysis of Next-Generation Airtankers	Federal Aviation Administration	\$ 145,659
Miller, Leonard	Experimental Program to Stimulate Competitive Research (RID) - Year 3	Goddard Space Flight Center	\$ 125,000
Kwon, Hyuck	Communication on the Move with Satellite Digital Beamforming	Air Force Research Laboratory	\$ 105,653
Chakravarthy, Animesh	CAREER: Generalizations in Obstacle Avoidance Theory- Year 4 Award	National Science Foundation	\$ 82,577
Gu, Shuang	DOE ARPA-E IONICS YAN1478-1505 2016	University of Delaware	\$ 59,582
Twomey, Janet	Workshop to Scope an Effective Environmental Genome Mapping Initiative	National Science Foundation	\$ 49,850

Implemented PhD student recruitment program.

GOAL 5: EMPOWER STUDENTS TO CREATE A CAMPUS CULTURE AND EXPERIENCE THAT MEETS THEIR CHANGING NEEDS.

First KOCH Innovation Challenge to infuse the entrepreneurial mindset in WSU students.

Supported third cohort of University Innovation Fellows; a program to empower students to become agents of change at their schools.

Supported students to bring TEDx to Wichita State University campus.



Koch Innovation Challenge

GOAL 6: BE A CAMPUS THAT REFLECTS – IN STAFF, FACULTY, AND STUDENTS – THE EVOLVING DIVERSITY OF SOCIETY.

CoE hired 11 new faculty members in 2017, 27.2% of whom are women.

CoE, together with NetApp, hosted a documentary film and panel discussion on the status of women in computer science, July 14, 2017.

CoE, together with Girl Scouts – sponsoring Girls Who Code Troops Fall 2017 and Spring 2018.

Engineering summer camps recruited and provided scholarships to a large number of students from under-represented groups.

Convened college diversity board.



Envision High School Access Technology Camp

GOAL 7: CREATE NEW MODEL OF ASSESSMENT, INCENTIVE AND REWARD PROCESSES TO ACCOMPLISH OUR VISION.

Revised tenure and promotion guidelines to include UNISCOPE model of scholarship.