

Budget Advisory Council Budget Proposal



College of Engineering and Computer Science

College Overview

- Engineering Program established in 1947, offering one Bachelor of Science in Engineering Degree.
- College of Engineering formed in 1974. College of Engineering and Computer Science formed in 1977. Discipline-based degrees offered beginning in 2003.
- College offers fully-accredited* degrees in 8 undergraduate programs, 3 master's level programs, 5 graduate certificates, 2 undergraduate certificates, and a Ph.D. in computational science.
- Degree programs administered by five departments: Civil and Chemical Engineering, Computer Science and Engineering, Electrical Engineering, Engineering Management & Technology and Mechanical Engineering.



College of Engineering & Computer Science

Vision

To be a preeminent college of engineering, technology, and computer science in education and applied research.

Mission

1. Educate and train future technical workforce for Tennessee, region, and beyond.
2. Discover new knowledge in engineering, technology and computer science.
3. Engage communities through scholarship and service.

FY19-22 Priorities

- **Enrollment Growth**
- Applied Research
- Student Success through Community Engagement



modernmechhac.com

MOUs

Transfer
Pathways



garrettpl.org

Outreach & Recruitment

High School Students
&
General Public



hrsoft.com

GRIP

Graduation &
Retention
Improvement
Plan



ncat.edu

Online Programs

Working Professionals
&
International Students

FY19-22 Priorities

- Enrollment Growth
- **Applied Research**
- Student Success through Community Engagement



Oes.umd.edu

**Graduate
Programs**



primaryleaders.com

**Workload
Adjustments**



americanunrsetoday.com

Support Programs
Research Mentoring
Proposal Writing



capestylemag.com

**Government & Industry
Partnerships**

FY19-22 Priorities

- Enrollment Growth
- Applied Research
- **Student Success through Community Engagement**



sfasu.edu

**Student
Success
Center**



Canterbury.ac.uk

**Research
Experience**



nyitcomsga.org

**Student
Teams
&
Organizations**

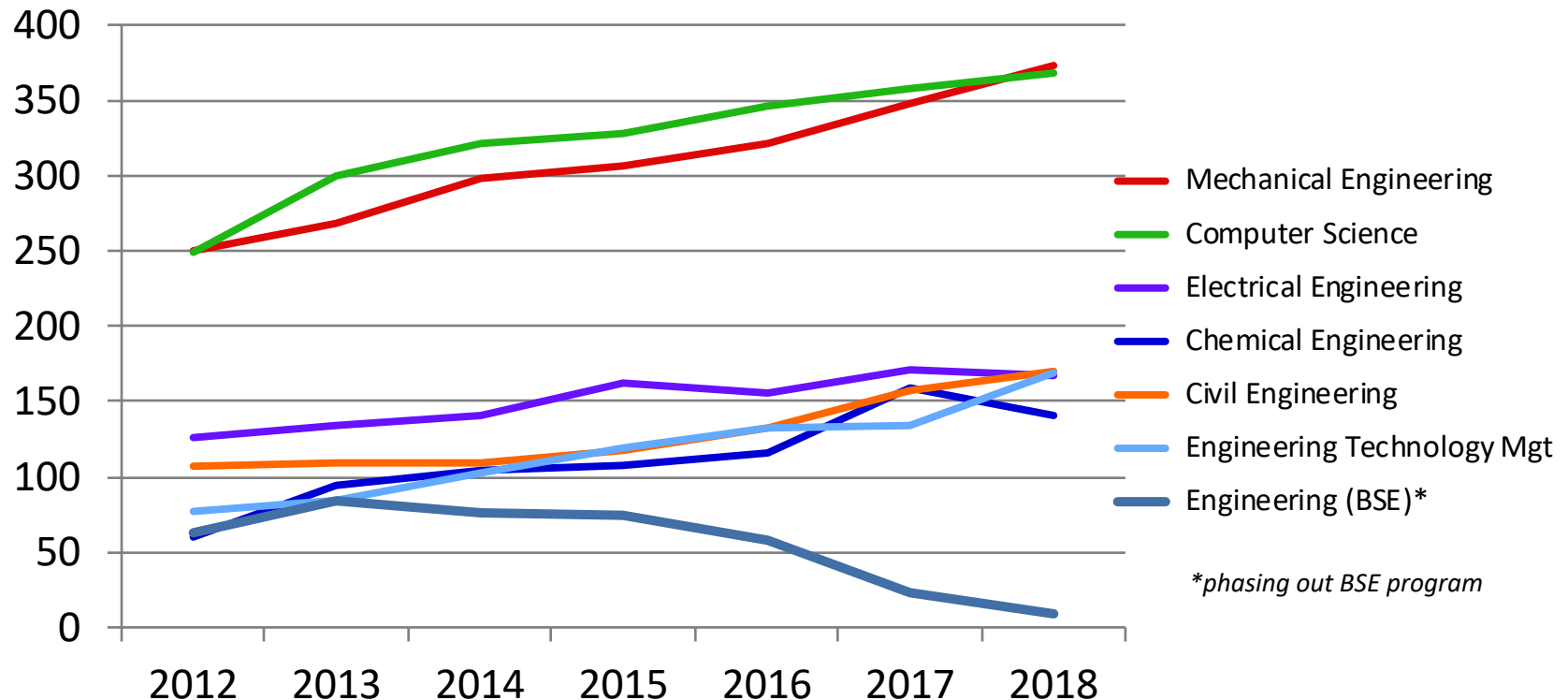


career.ku.edu

**Internships
Co-Ops
Entrepreneurship**

Division Accomplishments

Undergraduate Enrollment by Degree Programs

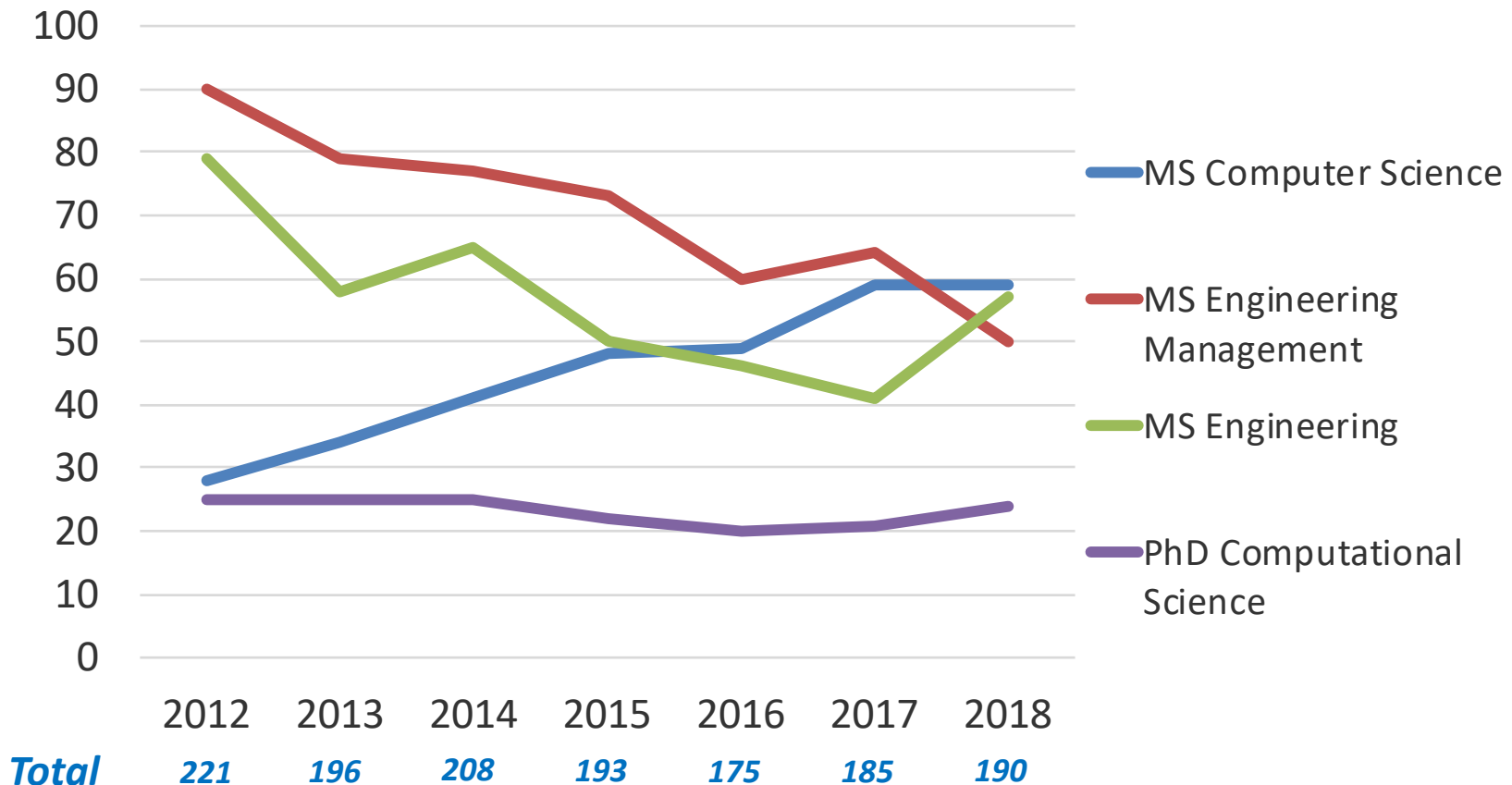


**phasing out BSE program*

College Totals: 931 1,074 1,152 1,216 1,261 1,350 1,398

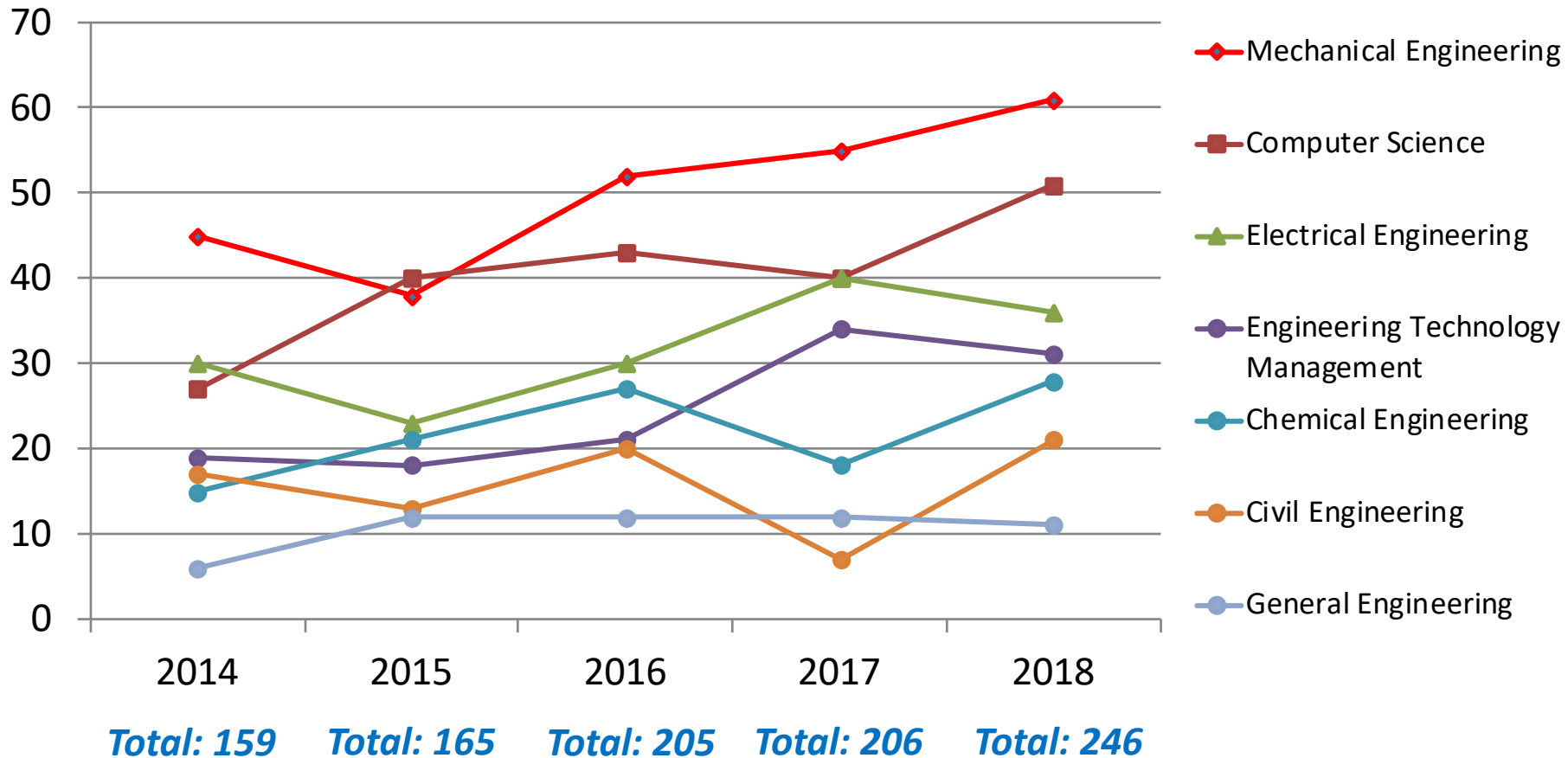
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Graduate Enrollment by Degree Programs



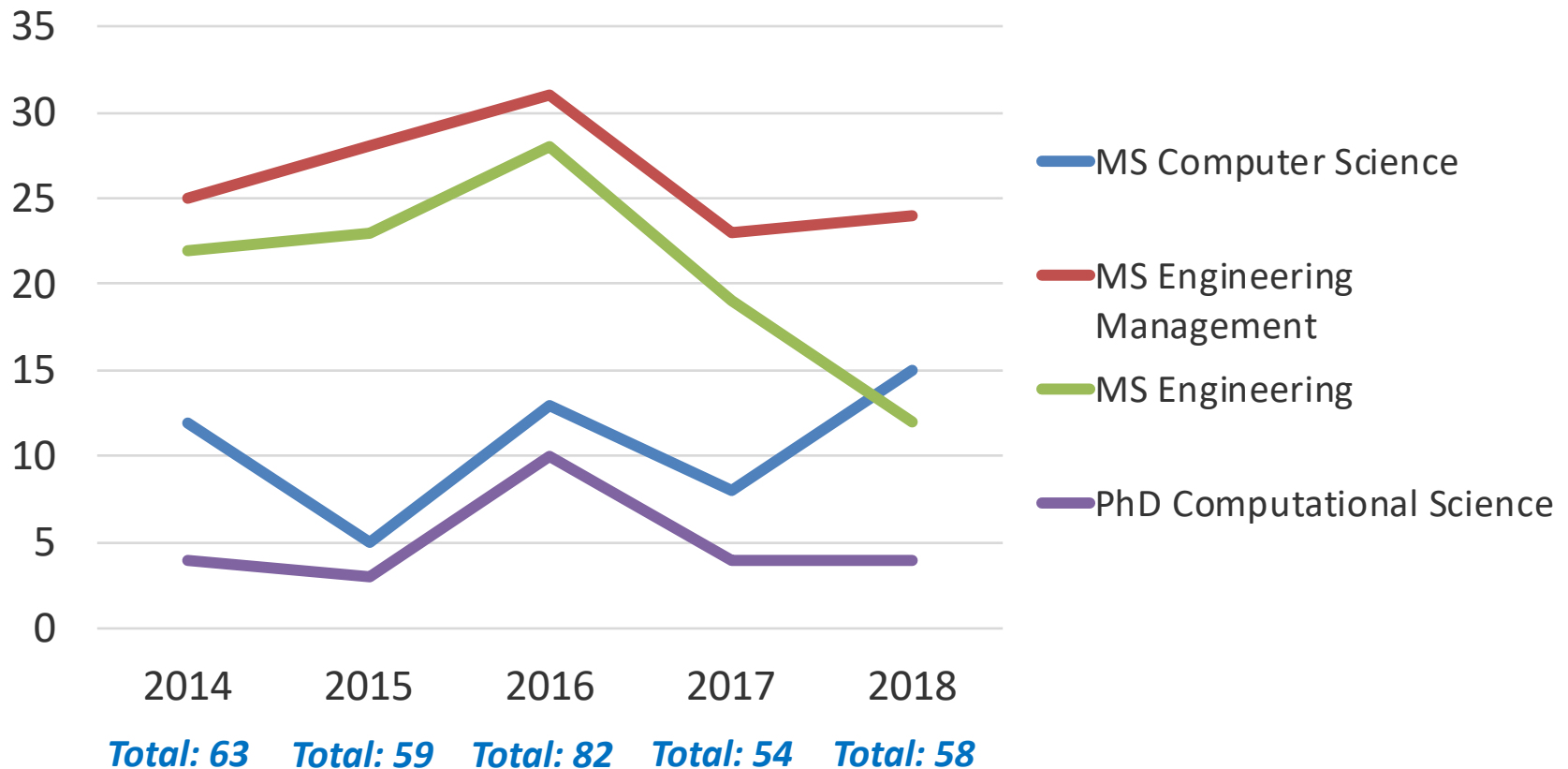
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Undergraduate Graduation History

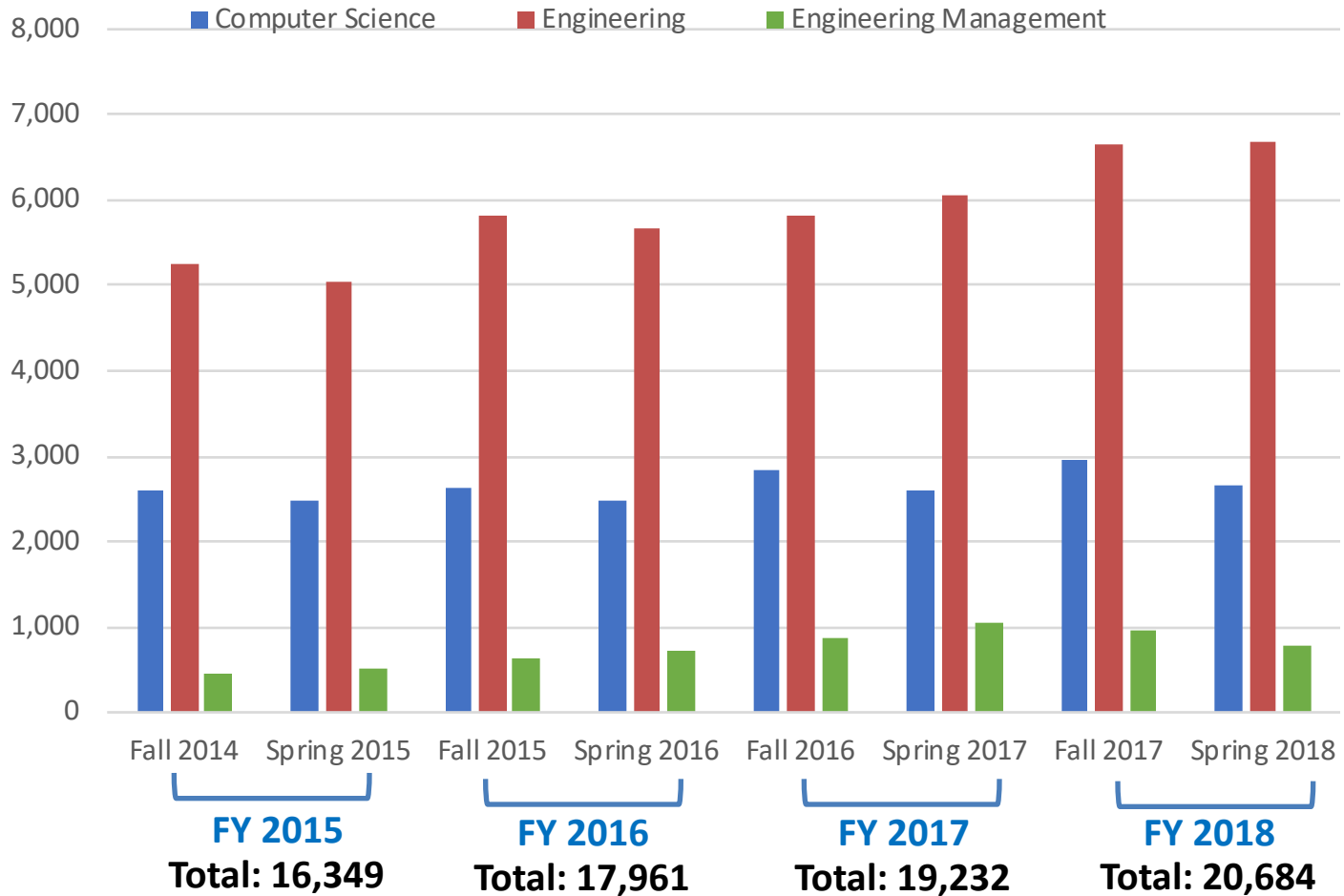


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Graduate Graduation History

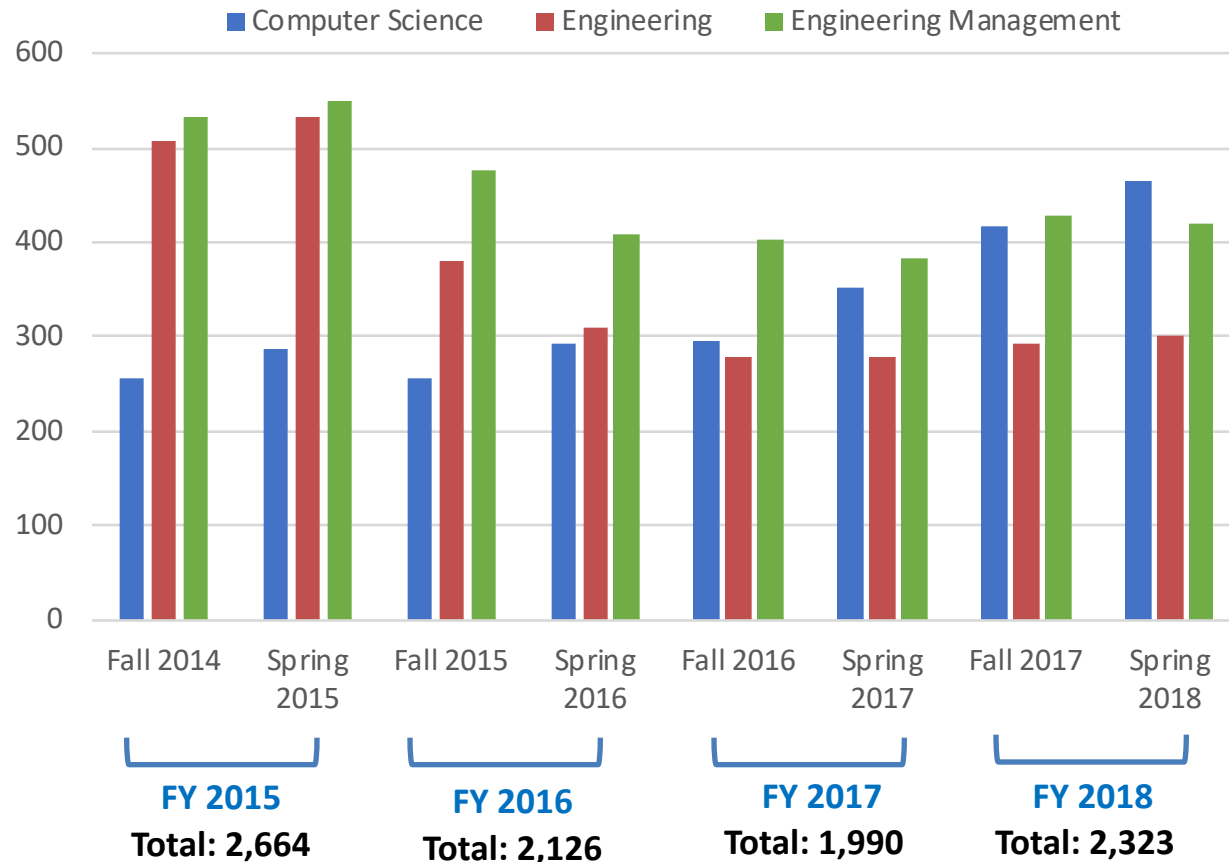


Undergraduate Student Credit Hour Production



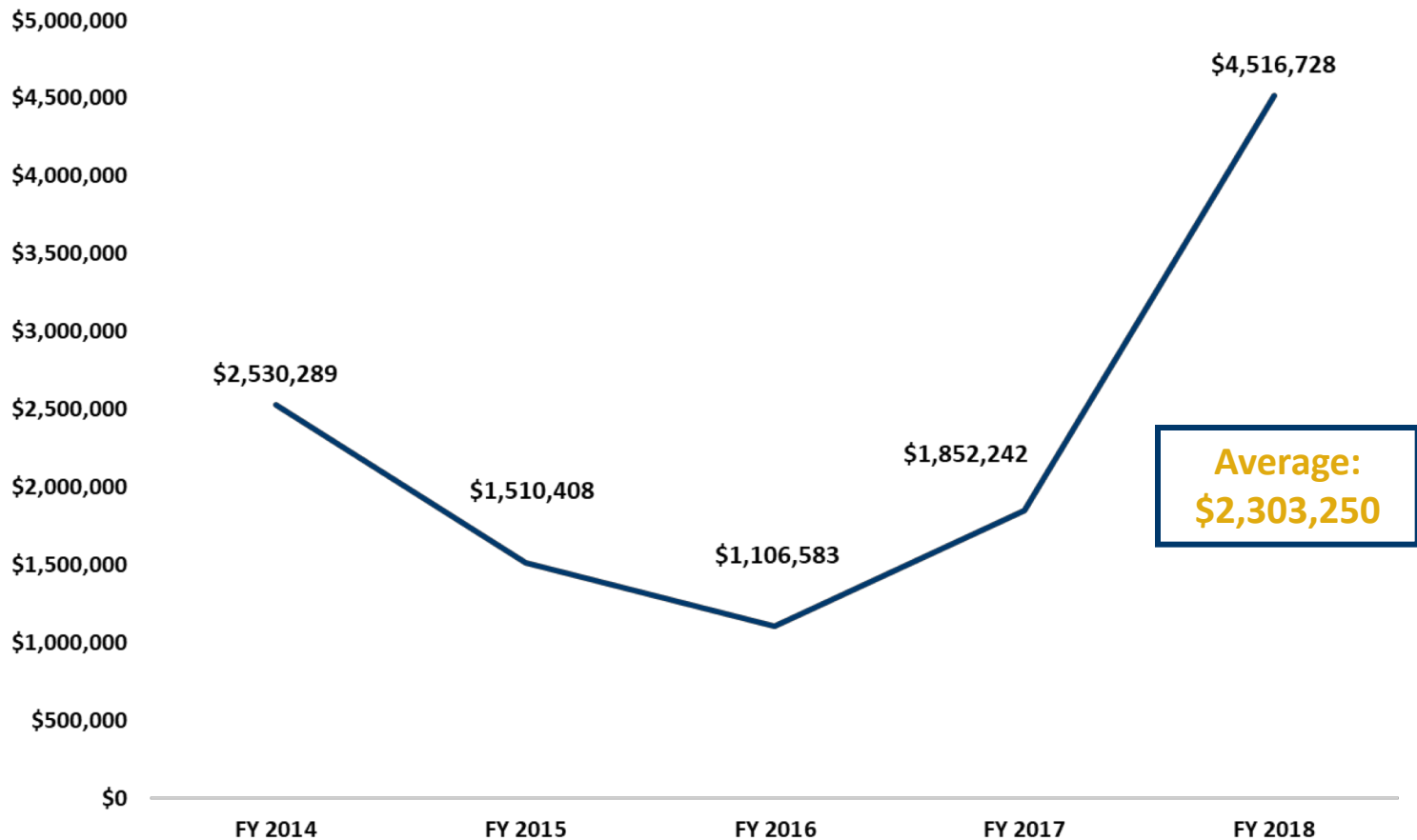
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Graduate Student Credit Hour Production



Applied Research Productivity

Total Award Dollars Received



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Applied Research Impact Examples

- CECS Electrical Engineering Department Partnering with TVA on transformer evaluation research
 - Direct Result: TVA saves \$1 million on each unit per year; three units = *\$3 million in savings each year.*
 - Nationally, this work impacts 100 units, saving 20-30%, or *\$30 million each year.*
- CECS Engineering Management and Technology Department Partnering with Erlanger Children's Hospital on outpatient flow improvement research
 - Direct Result: Erlanger saves \$1.05M over the next five years

Community Engagement through Scholarship and Service

- Technology Symposium - Bringing event into the community by partnering with the Enterprise Center and Co-Lab, April 17, 2019.
- 
- New academic programs launched in response to industry needs.
 - BAS in Mechatronics, BS in Computer Engineering
 - New graduate program under development in partnership with Rollins College of Business: MS in Data Analytics
 - \$697k worth of industry sponsored projects executed for the past four years.
 - Nine of 15 student organizations performed one or more community service projects in FY18.
 - Seven student teams compete in regional and national competitions and placed high standings, including 1st place in the SEDS (Students for Exploration and Development of Space) USRC (University Student Rocketry Challenge) by the UTC Rocket Mocs in October 2018.

College Needs

- **Enrollment Growth**

- Faculty lines in smart cities* (3), bio-engineering (4), computer engineering/science* (3), construction management (1), energy (2), mechatronics* (2), and manufacturing (2) – * obligated
- (new building) Space – senior design courses
- Costs for upgrading teaching labs
- Assoc. and Assist. Deans positions

- **Applied Research**

- (5,100 sq ft) Applied research/graduate student laboratory/work space
- Graduate programs seed funds
- Faculty Startup funds

- **Student Success through Community Engagement**

- Student Success Center staff (academic counselors, career counselor, FYE coordinator)
- Relief from differential tuition obligation



COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

FY 2018 Year End Summary

E&G Funds	Budget	Actuals
Revenue	-	65,540
Expenditures	8,863,118	8,389,212
Approved Carryovers		495,498
Discretionary Carryovers		43,947

Fees	Budget	Actuals
Revenue	1,482,910	1,619,349
Expenditures	1,614,583	1,039,491
Surplus/(Deficit)		711,532

FY 2020 Budget Requests

Priority	Request & Explanation	Permanent	One-time
1	New faculty position: Chemical Engineering	\$119,000	\$50,000
2	Academic Advisor	\$72,000	
3	Associate Dean Position	\$225,600	
4	Annual lab upgrades for Engineering and Computer Science programs	\$180,000	
5	Teaching Assistants and Graders	\$125,000	
<i>The above requests pertain to 15/4 implementation</i>			
1	New faculty position: Engineering Management* (Mechatronics)	\$119,000	\$50,000
2	New faculty position: MS Data Analytics*	\$119,000	\$50,000
3	Relief from differential tuition obligation; faculty lines being supported currently	\$248,659	
4	Labs for new programs, Mechatronics* and Computer Engineering		\$100,000
5	Start up funds for faculty to be hired in August 2019		\$200,000
6	Graduate program funding: research and teaching assistant positions	\$200,000	
7	New faculty position: Chemical Engineering (Bio-engineering)	\$119,000	\$50,000
	Total	\$1,527,259	\$500,000

COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

FY 2021 Budget Requests

Priority	Request & Explanation	Permanent	One-time
1	New faculty position: Chemical Engineering	\$119,000	\$50,000
2	Academic Advisor	\$72,000	
3	Assistant Dean	\$169,200	
4	Teaching Assistants and Graders	\$125,000	
<i>The above requests pertain to 15/4 implementation</i>			
1	New faculty position: Computer Engineering*	\$119,000	\$50,000
2	New faculty position: Construction Management	\$119,000	\$50,000
3	New position: Computer Science Lecturer	\$84,000	
4	Lab for new program, Mechatronics*		\$50,000
5	Relief from differential tuition obligation; faculty lines being supported currently	\$239,669	
6	Graduate program funding	\$50,000	
7	New faculty position: Chemical Engineering (Bio-engineering)	\$119,000	\$50,000
8	New faculty position: Civil Engineering	\$119,000	\$50,000
9	New faculty position: Mechanical Engineering	\$119,000	\$50,000
10	New faculty position: Electrical Engineering	\$119,000	\$50,000
	Total	\$1,572,869	\$400,000

COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

FY 2022 Budget Requests

Priority	Request & Explanation	Permanent	One-time
1	New faculty position: Computer Science	\$119,000	\$50,000
2	Teaching Assistants and Graders	\$125,000	
2	Career Counselor	\$72,000	
<i>The above requests pertain to 15/4 implementation</i>			
1	New faculty position: MS Data Analytics*	\$119,000	\$50,000
2	Graduate program funding (coordinator)	\$50,000	
3	New faculty position: Mechanical Engineering	\$119,000	\$50,000
4	Labs for new programs, Mechatronic*		\$50,000
5	New faculty position: Engineering Management (Mechatronics)*	\$119,000	\$50,000
6	New faculty position: Electrical Engineering	\$119,000	\$50,000
	Total	\$842,000	\$300,000