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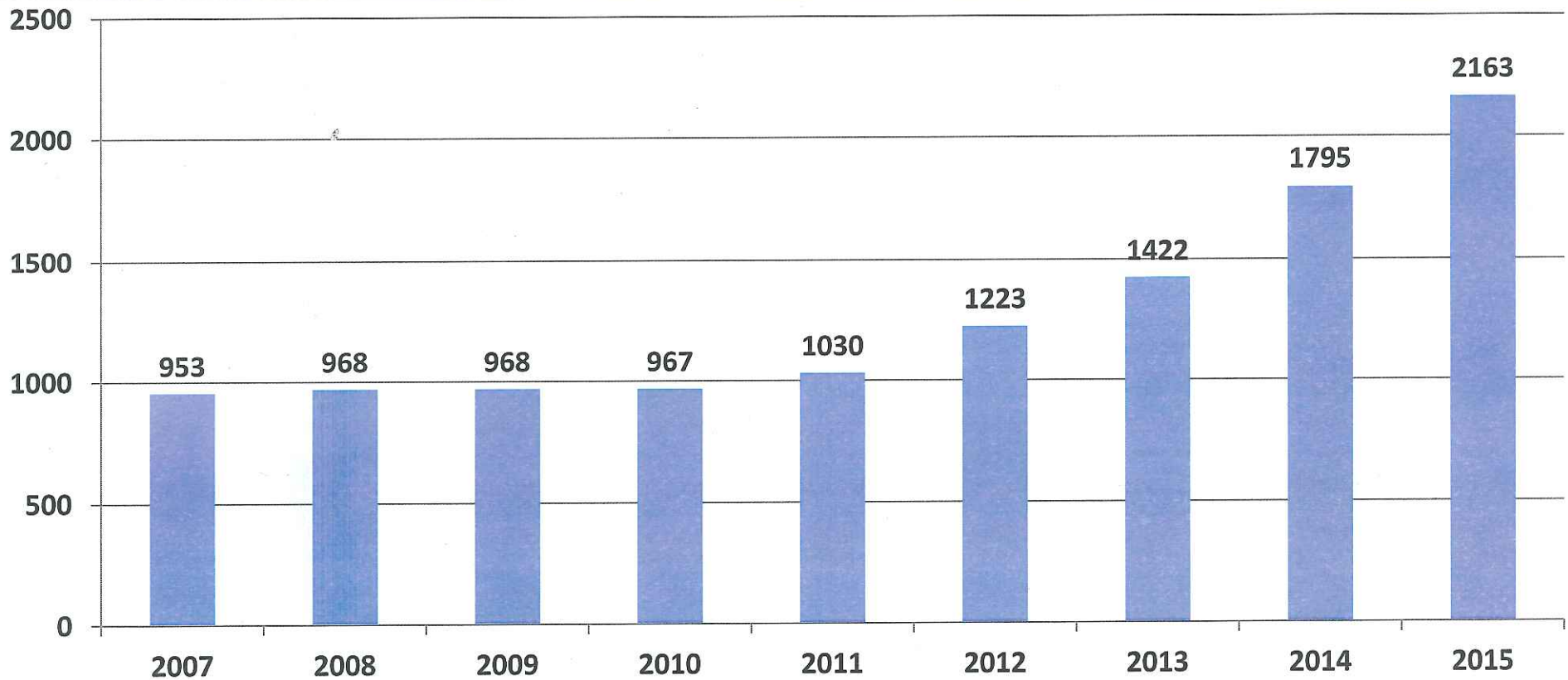


School of Engineering and
Computer Science

SECS Undergraduate Student Enrollment (2007-2015)



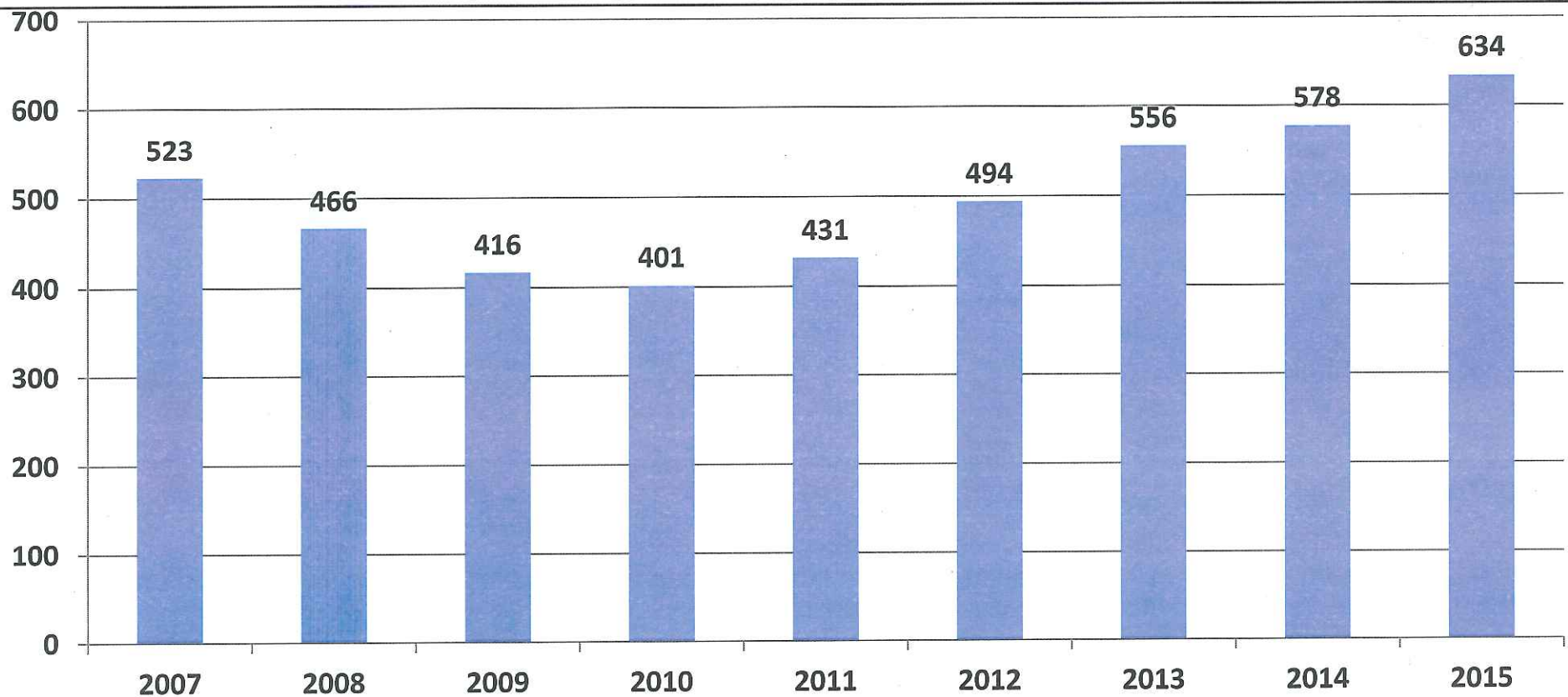
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SECS Graduate Student Enrollment (2007-2015)

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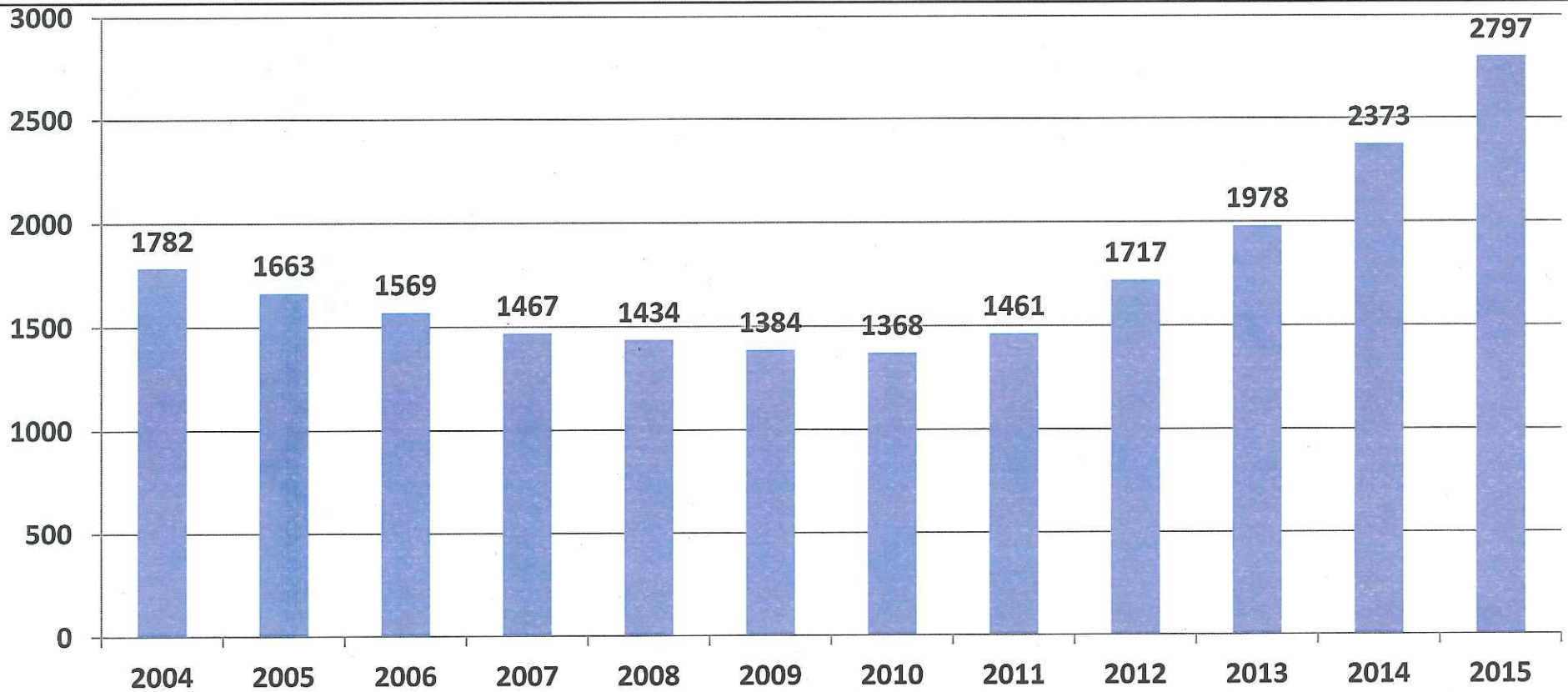
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SECS Total Student Enrollment (2004-2015)



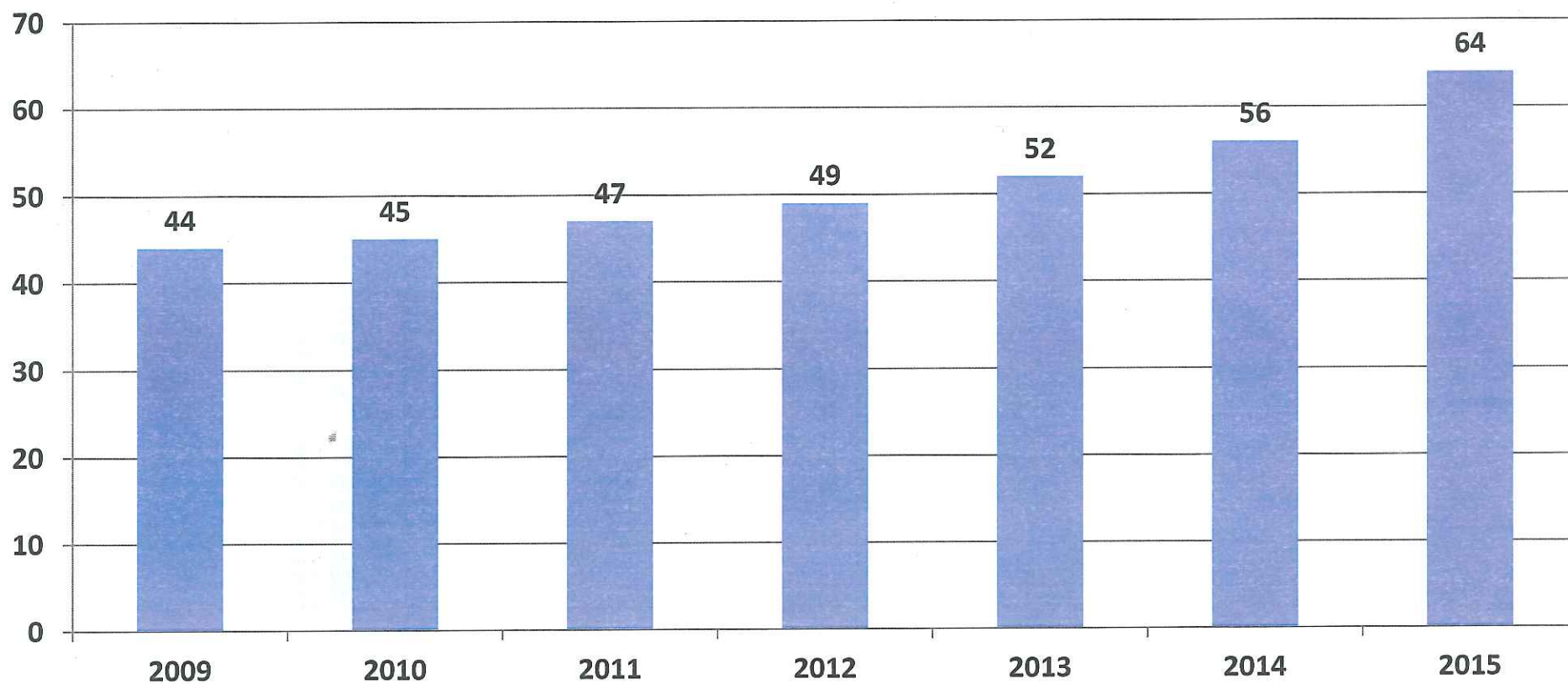
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SECS Faculty Positions (2009-2015)

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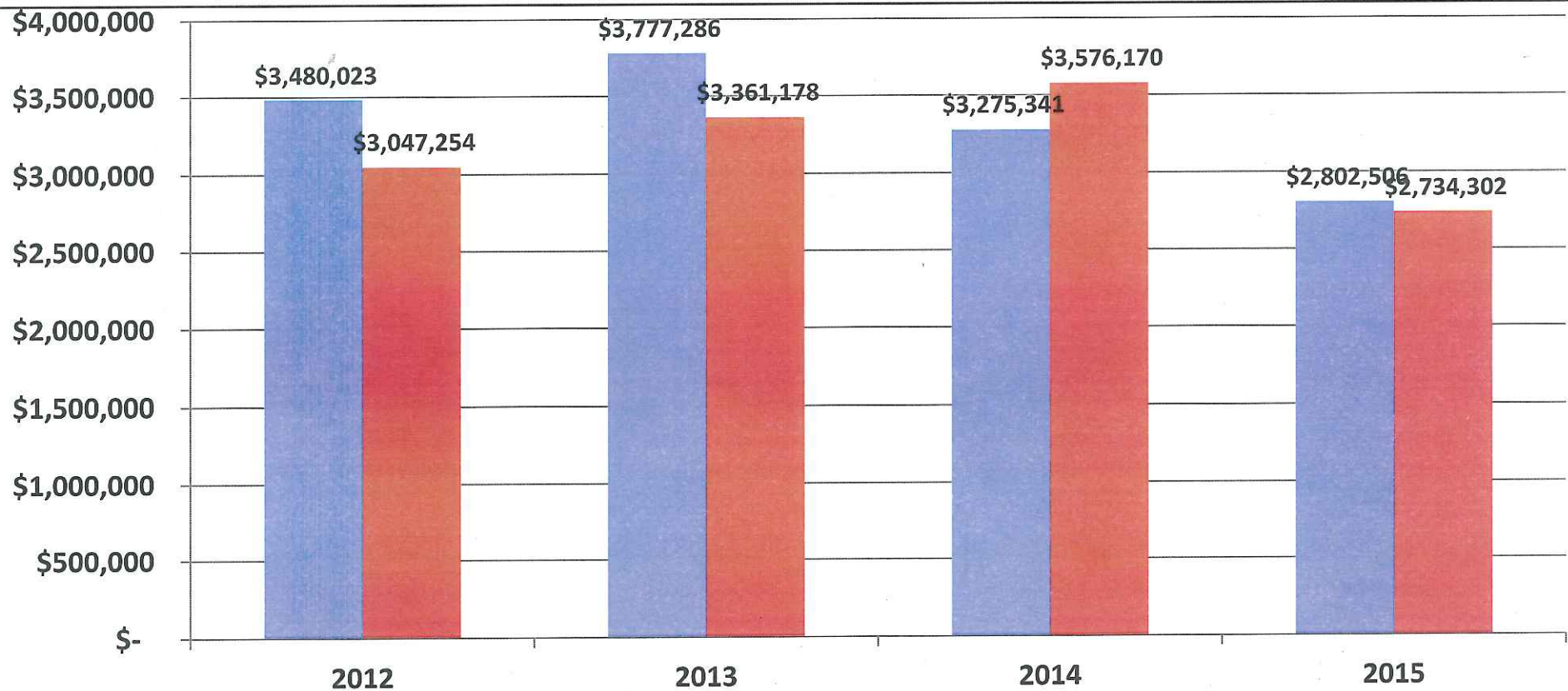
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SECS Research Awarded and Expenditures (2012-2015)



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CSE Highlights



School of Engineering and Computer Science

Huirong Fu:

1. Undergraduate Computer Research (UnCoRe) in Secure and Trustworthy Cyberspace, NSF, PI, \$359,988, 2015-2018.

Tao Shu:

1. NeTS: Small: Collaborative Research: Network Economics for Secondary Spectrum Ecosystems, NSF, PI, \$460,000, 2015 -- 2018
2. Collaborative Research: EARS: Large-Scale Statistical Learning based Spectrum Sensing and Cognitive Networking, NSF, PI, \$262,347, 2014-2017

Yonghong Yan:

1. Image Processing Cloud (IPC): A Domain-Specific Cloud Computing Infrastructure for Research and Education, PI, NSF, \$249,946.00, 2012 - 2016
2. SHF:Medium:Collaborative: Compute on Data Path: Combating Data Movement in High-Performance Computing, Co-PI, Awarded, \$153,000.00, 2014-2017
3. SHF:Small:Collaborative: Application-aware Energy Modeling and Power Management for Parallel and High Performance Computing, Lead PI, NSF \$250,000.00, 2014- 2017

ECE Department



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- **Students**
 - Institute of Electrical and Electronics Engineering Student Organization, OU Robotics Club, Aerial Robotics Club
 - NSF Grant (2010-2015) for Research Experience for Undergraduate Students
 - 1st Place finish in 2013 and 2014 Intelligent Ground Vehicle Competition
- **Research Highlights**
 - FY15 Research Expenditures of \$690K
 - 2015 NSF Career Award Winner (Jing Tang)
 - Past/Active grants from DARPA, FAA, NSF, and Air Force, Navy and Army
- **Key Lab Capabilities with Industry Usage**
 - Automotive Antenna Range – 2005-present NSF Major Research Instrumentation Award
 - OU/FCA Hardware-in-the-Loop Lab (with ME Dept.), OU/FCA Robotics and Controls Lab (2008-present) – Both projects are funded by FCA

Industrial & Systems Engineering

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- Product Lifecycle Management (PLM) initiative with Siemens PLM Inc.
- Lean initiative with OU's Pawley Lean Institute.
- Connected World/Internet of Things initiative.
- ISE 491 Senior Design student projects are conducted at local companies.
 - FCA, GM, Rayconnect, DTE Energy, St. Joseph Mercy Oakland Hospital, Beaumont Hospital - Troy, Crittenton Hospital.
- Total of 7 ISE faculty members with over \$750,000 in funding.
 - NSF, TARDEC, FCA, DTE Energy, ATT Foundation

ME Department

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Students

- Active Student Organizations – SAE
- NSF-Funded *Summer Research Experience for Undergrads* – Since 2006
- NSF-Funded *Research Experience for Teachers* – Begins Summer 2016
- Articulation Agreements with 5 Foreign Universities
- Recent graduate received an NSF graduate fellowship

Research

- \$2.3M 5-yr. Average Annual Research Expenditures
- Automotive Tribology Center (ATC)
- Center for Advanced Manufacturing and Materials (CAMM)
- Fastening and Joining Research Center (FAJRI)
- OU/FCA Hardware-in-the-Loop Lab (with ECE)

Faculty

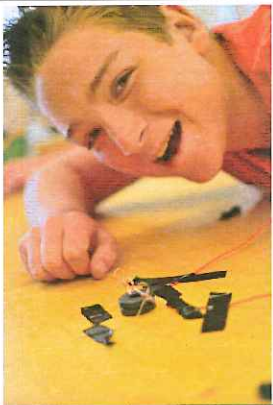
- 5 Fellow-Grade or Editor-Status Faculty



K-12 OUTREACH



School of Engineering and Computer Science



Goal for 2015-2016:
5,500 individual students; Elementary,
Middle, and high school students

A large population of students that need our help are in close proximity to OU:

- Traditional college-ready students
- Underrepresented minority students
Women in STEM
- High-achieving

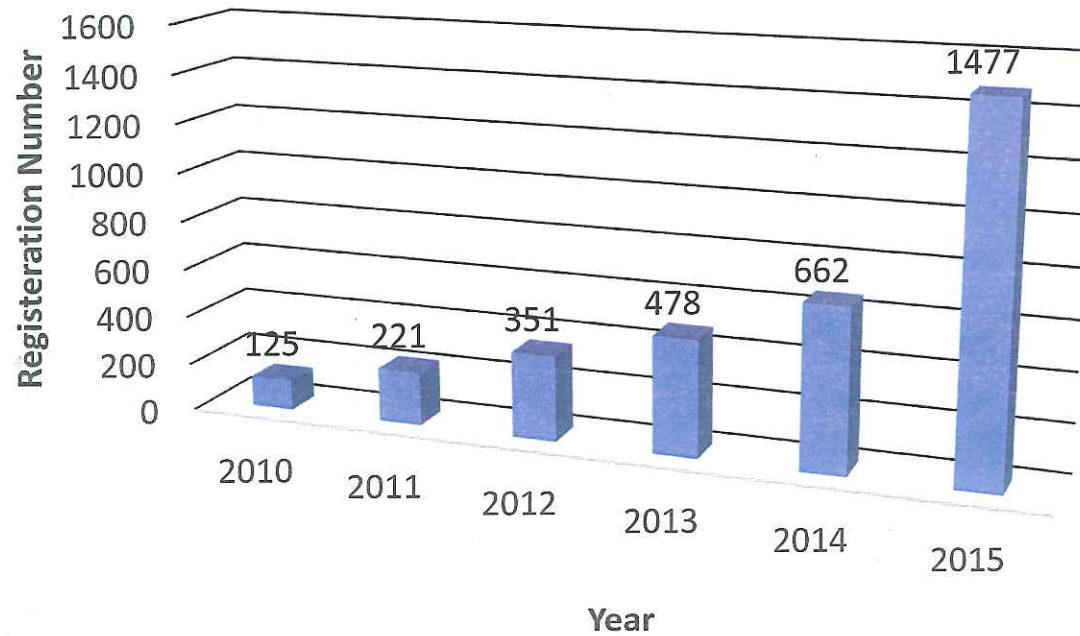
STEM Field Trip Days:

- 1,200 Rochester Community Schools (RCS) 4th graders (fall 2015)
- 800 PSA 4th graders (fall and winter)
- 1750 from individual schools
- On-site Saturday STEM teaching (UCS, Pontiac, Oxford, etc)

SECS Summer STEM Camps Growth

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OU INC

INNOVATE | ACCELERATE | EDUCATE

SmartZone Business Accelerator
Clean Energy Research Center

An International Center of Innovation



OU INC advances the economic strength of the region by transitioning industry and university innovations into commercial success through Innovation, Acceleration, Education and Engagement.

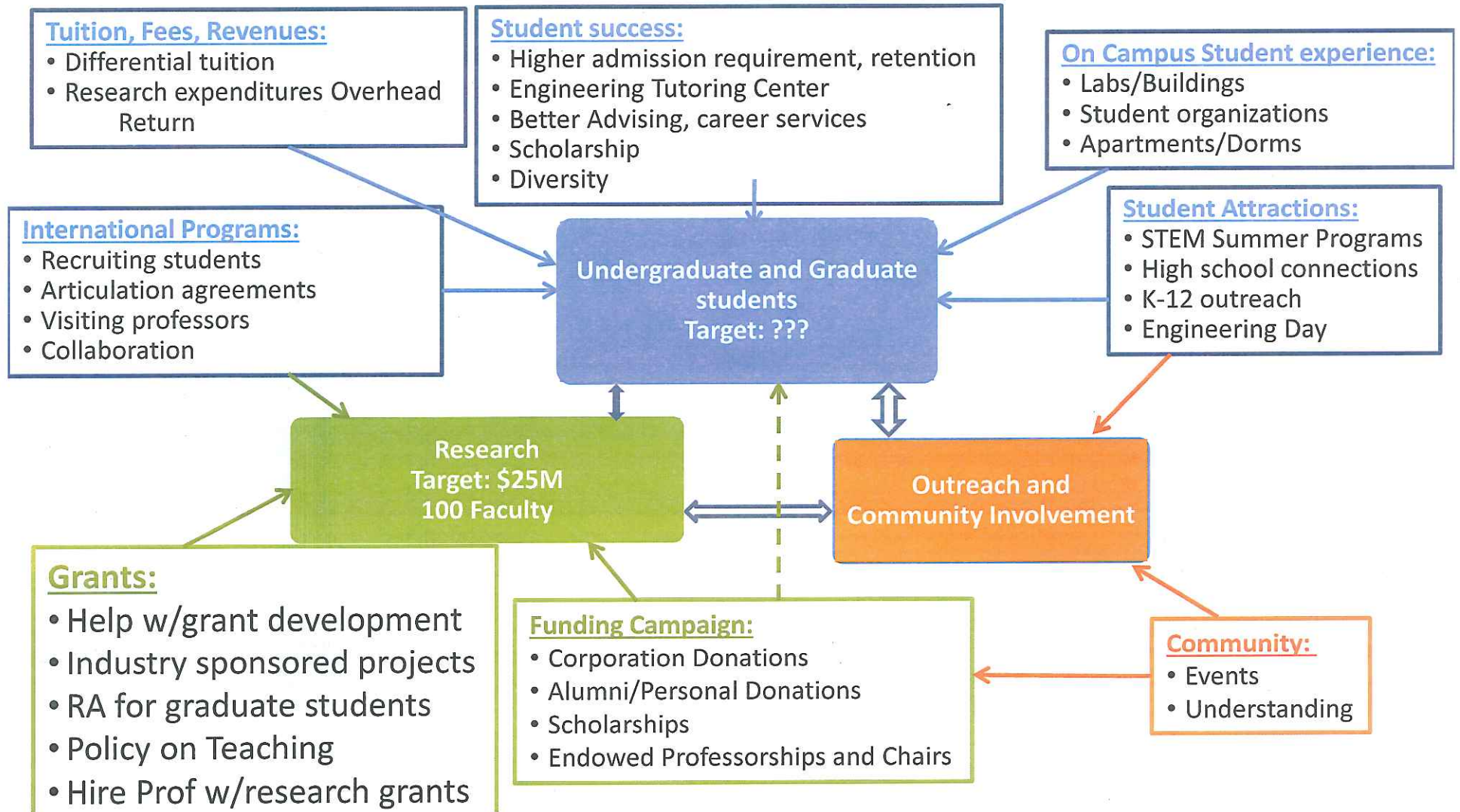
INNOVATE: Assist entrepreneurial start up firms and commercialization of university developed technology through business, finance, and technology strategy support.

ACCELERATE: Accelerate growth stage companies on the business and technology development to transition to sustainable businesses.

EDUCATE: Foster experiential learning through internship referrals, company projects, senior design and capstone projects, mentoring, STEM camps, competitions, and academic integration.

ENGAGE: Foster Partnerships with Community, Chambers, Business, Industry, Organizations, and University - including "Centers of Development" with Automation Alley, Clean Energy Center, and High-Volume Production Testing Center.





SECS Ranking:

- ❖ 182 in 2015 US news and World Report
- ❖ 15th in the country for percentage of women faculty in engineering

