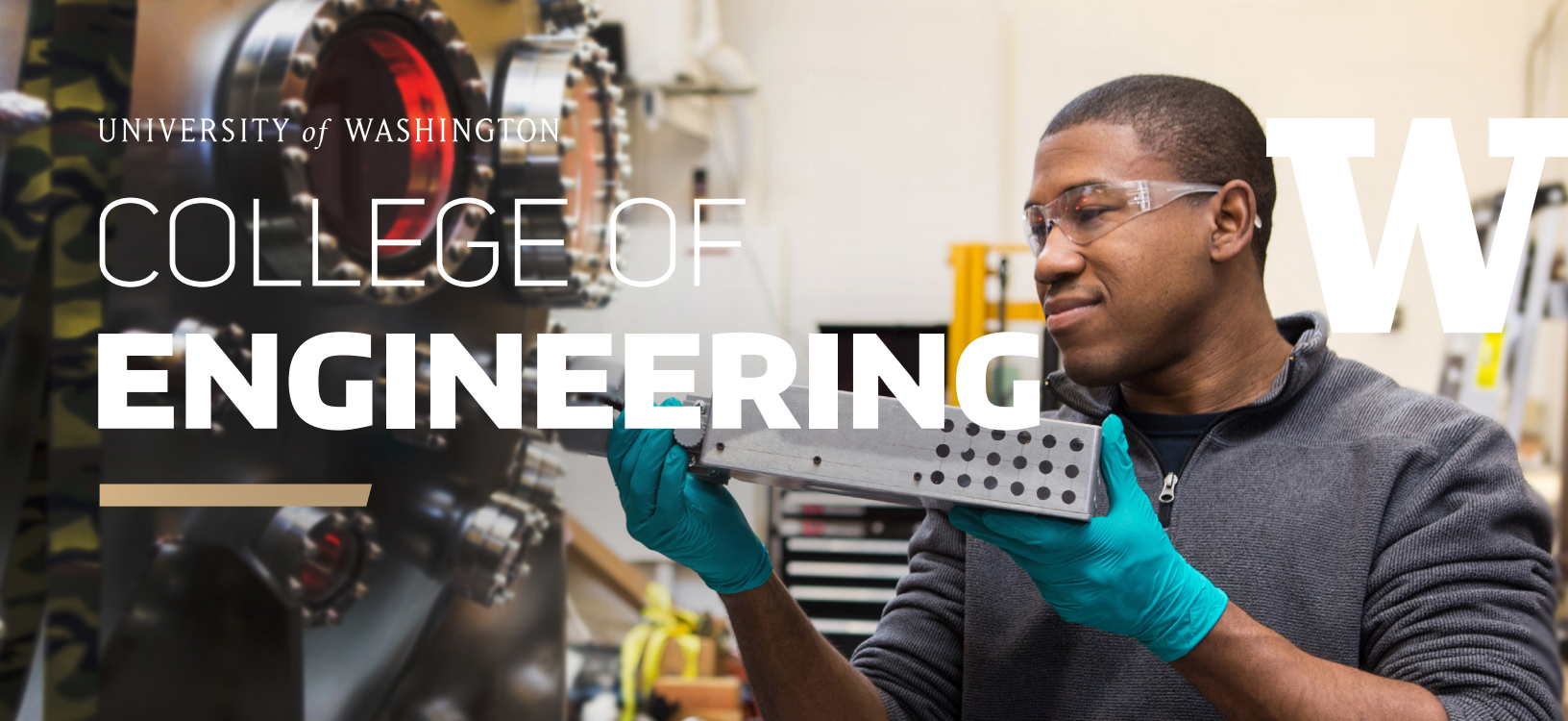


# COLLEGE OF ENGINEERING



As today's challenges become larger, there has never been a bigger need for innovative thinking. Together with world class partners, the University of Washington's College of Engineering is developing a new generation of innovators. A national leader in educating engineers, each year the College turns out new discoveries, inventions and top-flight graduates, all contributing to the strength of our economy and the health and vitality of our community.

## ACADEMIC DEPARTMENTS

- William E. Boeing Department of Aeronautics & Astronautics
- Bioengineering
- Chemical Engineering
- Civil & Environmental Engineering
- Computer Science & Engineering
- Electrical Engineering
- Human Centered Design & Engineering
- Industrial & Systems Engineering
- Materials Science & Engineering
- Mechanical Engineering

## DEGREE PROGRAMS

- Bachelor of Science (BS)** - prepares students for graduate work or careers in industry.
- Master of Science (MS)** - prepares students with a high level of technical competence for careers as professional engineers, or for further graduate study.
- Doctor of Philosophy (PhD)** - trains engineers for research leadership roles in academia, industry and research institutions.

## STUDENT DEMOGRAPHICS

Undergraduate enrollment: 5,152 | Bachelor's degrees awarded 2015: 969  
Graduate enrollment: 2,333 | Master's degrees awarded 2015: 562  
Doctoral degrees awarded 2015: 131

DIVERSITY OF DEGREE RECIPIENTS	BS	MS	PhD
Women	22%	26%	27%
Underrepresented Minorities*	8%	6%	6%
Asian Americans	25%	13%	6%
Foreign Nationals	17%	27%	40%

\*African American, Hispanic American, Native American and Hawaiian/Pacific Islander

## FACULTY

247 faculty (22.4% women)

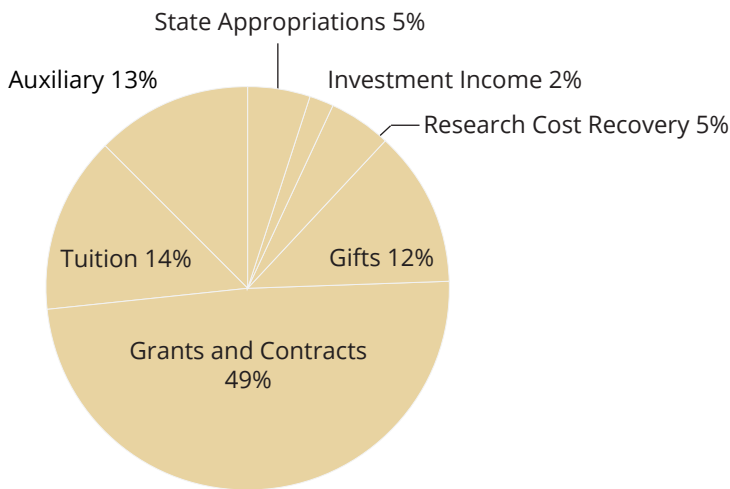
### Achievements:

- 20 members of the National Academy of Engineering
- 95 NSF Young Investigator/Early Career Awards since 1984
- 28 Sloan Foundation Research Awards
- 2 MacArthur Foundation Fellows

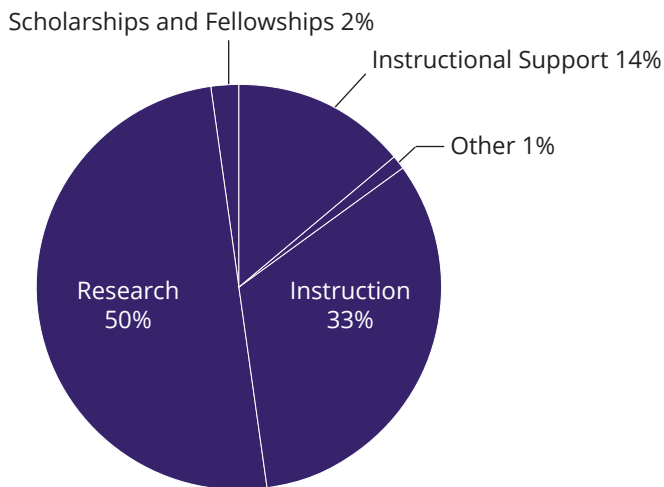
# FINANCING ENGINEERING

- The College of Engineering has varied revenue sources with grants & contracts making up 49 percent, or 242.1 million of total revenues for fiscal year 2015.
- Tuition represents 14 percent of total revenues and state operating appropriations were 5 percent of total revenues.
- Two primary functions of the University, instruction and research, comprised 97 percent of the total operating expenses of the College of Engineering.
- The College of Engineering provided over \$4.7 million in scholarships and fellowships to students.

## COE SOURCES OF FUNDS FY 2015



## COE USES OF FUNDS FY 2015



## ECONOMIC IMPACT ON WASHINGTON STATE

Engineers drive the innovation economy and are vital to solving society's largest problems. The University of Washington's College of Engineering plays a critical role in educating tomorrow's innovators. The UW is an economic powerhouse in the state, directly and indirectly affecting every resident of Washington. The College of Engineering accounts for 5% of UW's overall impact generating revenue, jobs and spending.

## COMMITMENT TO DIVERSITY & ACCESS

The College of Engineering is committed to developing and supporting a diverse student body and faculty that reflect and elevate the populations we serve. We are a national leader in women in engineering, 22.4% of our faculty are women compared to 15% nationally. We offer a robust set of diversity programs for students and faculty.

## RESEARCH & COMMERCIALIZATION

The University of Washington is an engine of economic growth, today ranked third in the nation for the number of startups launched each year, with 65 companies having been started in the last five years alone by UW students and faculty, or with technology developed here. The College of Engineering is a key contributor to these innovations, and engineering faculty, students or technology are behind half of all UW startups. Engineering research expenditures totaled \$142 million in FY 2015.



# PROGRAMS

## LEADERSHIP IN ENGINEERING EDUCATION

### Center for Engineering Learning & Teaching (CELT)

Improves engineering education through research and faculty development

### Center for Advancement of Engineering Education (CAEE)

Funded by NSF, a collaboration of universities to improve engineering education

## DIVERSITY

### ADVANCE

NSF-funded, supports women faculty and cultural change in academic science and engineering careers

### DO-IT (Disabilities, Opportunities, Internetworking, Technology)

Provides outreach for students with disabilities, and resources for educators and employers

### GenOM

Recruits and advises minority students in genomics

### Mathematics Academy

A summer program for high school juniors from diverse backgrounds who wish to pursue the study of engineering

### MSEP (Minority Scholars & Engineering Program)

Provides recruitment and retention programs for underrepresented minority students in engineering

### WiSE (Women in Science & Engineering)

Provides recruitment and retention programs for women in science and engineering

## COMMUNITY

### CO-OP (Engineering Cooperative Education Program)

Assists employers in hiring qualified, interested students for 3-6 month engineering Co-Op positions

### EPP (Engineering Professional Programs)

Provides continuing education and professional development for engineers and allied technical professionals

### EDGE (Education/Distance Learning)

Provides graduate degrees and certificate programs in engineering to working professionals; courses are delivered via web streaming

### STARS (Washington State Academic RedShirt in Engineering Program)

Funded by NSF, brings low-income, highly motivated Washington state high school graduates to the UW and WSU to study engineering

## RESEARCH

### Bio-Sciences

- Engineering Research Center for Sensorimotor Neural Engineering (CSNE)
- Genetically Engineered Materials Science and Engineering Center (GEMSEC)
- Microscale Life Sciences Center
- National ESCA and Surface Analysis Center for Biomedical Problems (NESAC/BIO)
- National Simulation Resource Center Physiome Project (NSR)
- Resource Facility for Population Kinetics (RFPK)
- University of Washington Engineering Biomaterials Research Center (UWEB)

### Electronics and Computing

- Center for Collaborative Technology
- Center for Design of Analog-Digital Integrated Circuits (CDADIC)
- Intel Research Seattle
- Laboratory for Usability Testing and Evaluation (LUTE Lab)
- Turing Center

### Energy

- Advanced Materials for Energy (AME)
- Bioenergy Program
- Northwest National Marine Renewable Energy Center (NNMREC)
- Plasma Science and Innovation Center

### Materials and Structures

- Center for Intelligent Materials and Systems (CIMS)
- Center of Excellence for Advanced Materials in Transport Aircraft Structures (AMTAS)
- Institute of Advanced Materials & Technology (i-AMT)
- National Institute of Materials Science (NIMS)
- Pacific Earthquake Engineering Research Center (PEER)

### Molecular Engineering, Nanotechnology & Microfabrication

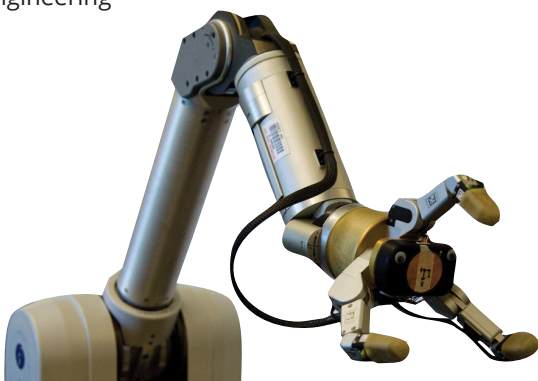
- Center for Nanotechnology
- NanoTech User Facility
- Washington Nanofabrication Facility
- Molecular Engineering & Sciences Institute

### Transportation

- Intelligent Transportation Systems
- Pacific Northwest Transportation Consortium (PacTrans)
- Washington State Transportation Center (TRAC)

### Other Centers Involving Engineering Faculty

- Boeing Advanced Research Center (BARC)
- Center for Materials and Devices for Information Technology Research
- Center for Process Analytical Chemistry (CPAC)





# TRAILBLAZERS

Graduates of the College of Engineering have become pioneers in technology, aerospace and government. Here are some outstanding examples of how our alumni are changing the world:

**Greg Badros** (MS '98, PhD '00 Computer Science & Engineering) is the vice president of Engineering & Products at Facebook, leading advertising, search and data science. Prior to working at Facebook, Greg was the senior director of engineering at Google, and led the AdSense engineering team as well as Gmail, Calendar, and Reader. He joined Facebook in 2009 and grew the advertising systems to hundreds of billions of impressions per day.

**Andrew Benedek** (PhD '70 Chemical Engineering) developed membrane technology that has revolutionized the water-treatment industry and brought clean water to communities across the world. He founded ZENON Environmental Inc. and the resulting "Z-Weed" membranes are currently used in over 440 wastewater and drinking water treatment plants across the globe.

**Jeremy Jaech** (MS '80 Computer Science & Engineering) is a University of Washington regent, and the CEO of SNUPI Technologies, a company that provides home sensors and services using technology from UW and Georgia Tech. Jeremy is an accomplished entrepreneur who has co-founded software companies including Aldus (acquired by Adobe and branded as PageMaker), Visio (acquired by Microsoft) and Trumba.

**Sally Jewell** (BS '78 Mechanical Engineering) is the 51st United States Secretary of the Interior, leading an agency with over 70,000 employees. In this role, she is responsible for stewarding 20 percent of the nation's lands, including national parks and wildlife refuges. Prior to becoming Secretary, Sally was the president and CEO of REI, a national outdoor retailer and the nation's largest consumer cooperative.

**Jon Magnusson** (BS '75 Civil Engineering) is the former chairman and CEO of Magnusson Klemencic Associates (MKA), an international award-winning structural and civil engineering firm in Seattle. He has been responsible for the structure of Seattle landmarks including the Experience Music Project, Benaroya Hall, Safeco Field, Seahawks Stadium, and the Seattle Central Library.

**Steve Rogel** (BS '65 Chemical Engineering) is one of the pulp and paper industry's most respected and well-known leaders. During his tenure as CEO, he guided Willamette Industries to the top of the market and transformed Weyerhaeuser into one of the largest forest products companies in the world.

**John Roundhill** (BS '67, MS '73 Mechanical Engineering) is the former vice president of product strategy and development of The Boeing Commercial Airplane Group. During his 37 years at Boeing, he served in product development and engineering positions that include Director of Engineering for the 737/757 programs, and Chief Project Engineer for the 767 Freighter. For the 777, his responsibilities included preliminary design, product development, and marketing. As a two-time graduate of the UW, he served as the Boeing liaison for many years.

## LEADERSHIP

**Michael B. Bragg**  
Frank & Julie Jungers Dean of Engineering

**Pedro Arduino**  
Associate Dean of Infrastructure

**Santosh Devasia**  
Associate Dean of Research & Faculty Affairs

**Brian Fabien**  
Associate Dean of Academic Affairs

**Eve Riskin**  
Associate Dean of Diversity & Access

**Judy Mahoney**  
Associate Dean of Advancement

## ABOUT THE UNIVERSITY

**State Funding:** State dollars represent 5 percent of the UW's revenue.

**Research Funding:** For more than three decades, the UW has secured more federal research funding than any other public university in the country.

**Access:** One in every four current UW undergraduates from Washington state have their tuition and fees fully covered by the Husky Promise scholarship program. This makes our university one of the most economically diverse in the nation.