

# College of Engineering Annual Faculty Meeting

May 23, 2018



**UC DAVIS**

**COLLEGE OF ENGINEERING**

# Meeting Minutes

- UNIVERSITY OF CALIFORNIA, DAVIS  
VOLUME XXXVIII, NO. 3
- ACADEMIC SENATE
- MINUTES (POSTED TO THE COE INTRANET)
- REGULAR MEETING
- FACULTY OF THE COLLEGE OF ENGINEERING  
(DAVIS)
- MAY 23, 2018, 3:00 P.M., 1003 KEMPER HALL

# Order of Business

1. Announcements by the President, Janet Napolitano  
(none)
2. Announcements by the Chair, Greg Miller (slides  
to follow)

# Executive Committee Activities

- Discussed and/or commented on Physical Sciences and Engineering Library proposal, 3% tax on 19900 funds, college plans for CS, data science proposal, Aggie Square, college budget and campus partnering with FireEye
- Developed, administered and summarized evaluation of Dean Curtis
- Consulted on college academic advising concerns
- Approved Course Materials and Services Fees – 22 renewals, 3 revised, 30 new
- Approved undergraduate curriculum changes – BAE, BME, CEE, CS and ECE

# Executive Committee Activities continued...

- Reviewed and/or responded to eight Requests for Consultation (RFCs) from Academic Senate:
  - Negotiated Salary Trial Program
  - Presidential Unmanned Aircraft System Policy
  - Second Systemwide Review of APM on LSOEs
  - Report of the Joint Task Force on Research Units
  - Proposed revisions to APM on Appointment, Merit and Promotion of Specialists
  - Proposed revisions to APM on Endowed Chairs
  - Proposed revisions to APM on Academic Senate and Federation Review for Advancement
  - Proposed revisions to APM on Academic Recruitment Guidelines

# Order of Business continued...

Standing Committee Report (out of order)

Research and Library Committee  
Stavros Vougioukas, Chair

3. Announcements by the Dean, Jennifer S. Curtis
  - Slides to follow

# College of Engineering Budget Briefing and Update

*Presented to:*

Faculty Executive Committee – April 25, 2018

College Leadership – May 2, 2018

Campus Leadership – May 3, 2018

College Staff – May 22, 2018

Annual Faculty Meeting – May 23, 2018

# Dean's Office Budget FY 18-19

## SOURCES

	<u>AMOUNT</u>	<u>%</u>
TOTAL CARRY FORWARD FROM FY 17-18 (PROJECTED)	\$4,605,453	10%
TOTAL BASE & RECURRING FUNDING	\$37,752,245	82%
TOTAL ONE TIME OR LIMITED TIME SOURCES	\$3,720,150	8%
<b>TOTAL SOURCES</b>	<b><u>\$46,077,848</u></b>	<b><u>100%</u></b>

## EXPENDITURES

TOTAL RECURRING EXPENSES TO OTHER CAMPUS UNITS	\$2,295,626	5%
TOTAL RECURRING EXPENSES TO DEPARTMENTS	\$24,264,515	57%
DEAN'S OFFICE OPERATIONAL UNITS – RECURRING EXPENSES	\$11,478,889	27%
ONE TIME OR LIMITED TIME EXPENSES (FIRM COMMITMENTS)	\$5,027,383	11%
<b>TOTAL EXPENDITURES</b>	<b><u>\$43,066,413</u></b>	<b><u>100%</u></b>

**PROJECTED BALANCE – CARRY FORWARD**

**\$3,011,435**

**REMAINING FIRM START UP COMMITMENTS TO BE PAID OUT AFTER 2018-19  
(not including hires in 2018-19)**

**\$4,605,949**



## **RECURRING SOURCES**

Carry Forward Funds from 2017-18 (PROJECTED)	\$4,605,453
Base Budget	\$12,526,477
Increment to Base Budget from Tuition	\$410,000
Increment to Base Budget from Staff Merits	\$109,511
Increment to Base Budget from Faculty Separations	\$491,504
Benefits	\$11,508,882
Increment to Base Budget for Benefits Costs	\$1,043,964
TA Funds	\$2,127,656
Increment to TA Funds	\$0
MS Pilot Revenue	\$608,000
Grad Fee Remission and Grad Budget Model	\$537,007
Increment to Grad Fee Remission and Grad Budget Model	\$0
Grad UCOP Funds	\$302,931
MEIP allocation (\$90K Dean, \$361K Programs Projected)	\$451,000

Note: Total Graduate Support Funds = \$1,898,938

## RECURRING SOURCES

ICR	\$4,730,123
Increment to ICR	\$488,705
Summer Sessions	\$554,000
Lottery and Advising Funds	\$204,380
CNM2 Recharge Revenue	\$375,000
Gift Fee Revenue, Annual Fund	\$500,000
Other Donations to College	\$250,000
Academic Year Cost Recovery	\$68,000
Patent Funds	\$66,100
IT (MOUs with other units)	\$246,000
Watershed Room, Other funds	\$37,996
HIP Position Funds (Salary and Benefits)	<u>\$115,009</u>
<b>TOTAL RECURRING SOURCES</b>	<b>\$37,752,245</b>

## ONE TIME OR LIMITED TIME SOURCES

Development Officer Funding - Provost	\$347,709
DEVAR Development Funding for New Campaign	\$101,170
BME ICR from CIRM grants with SOM	\$333,000
Dean's Research Funds	\$100,121
Dean's Discretionary	\$400,000
Spafford Lease Reimbursement	\$787,000
Block Grant for Start Up	\$1,000,000
Campos, PFP salary	\$356,150
HIP Funds for Start Up	<u>\$295,000</u>
<b>TOTAL ONE TIME OR LIMITED TIME</b>	<b>\$3,720,150</b>

**TOTAL SOURCES**

**\$46,077,848**

**RECURRING EXPENDITURES TO OTHER CAMPUS UNITS**

Annual Fund Assessment	\$33,990
OP Tax to Campus	\$1,946,000
Common Goods Assessment	\$98,511
OPS Programming to CAES	\$8,008
Graduate Studies (Multi-Year Fellowship Program)	\$100,000
School of Medicine Faculty Split Appointments	\$109,117
<b>TOTAL RECURRING EXPENSES TO OTHER CAMPUS UNITS</b>	<b>\$2,295,626</b>

## **RECURRING EXPENDITURES TO DEPARTMENTS**

New Faculty Hires in 2018-19 (Salary & Benefits)	\$1,040,123
Graduate Support to Departments	\$1,361,613
TA Support to Departments	\$3,511,396
Benefits to Departments	\$13,830,220
ICR to Departments and Faculty	\$2,670,542
Summer Session to Departments	\$554,000
Visa Funding for New Faculty	\$20,000
Off-Scale Increases	\$125,000
Other Support to Departments (Administrative Stipends, GAEL, Faculty Awards, Chair Support, IUC)	<u>\$1,151,621</u>
<b>TOTAL RECURRING EXPENDITURES TO DEPARTMENTS</b>	<b>\$24,264,515</b>

<b>DEAN'S OFFICE RECURRING EXPENDITURES</b>	<b>AMOUNT</b>	<b>FTE</b>
1. Engineering Undergraduate Office	\$1,230,416	10.85
2. Shared Services – HR / Payroll and Accounts Payable	\$1,129,023	11.10
3. Information Technology	\$2,088,592	9.00
4. Dean's Office Administration	\$1,179,388	4.50
5. Development	\$1,437,344	10.00
6. Research and Graduate Studies	\$356,996	1.75
7. Facilities	\$917,215	4.75
7A. Student Design Center (EFL)	\$588,235	4.00
8. Administrative Support	\$303,499	3.00
9. Marketing and Communications	\$586,322	3.00
10. Center for Nano and Micro Manufacturing	\$1,137,368	6.00
11. Student Startup Center	\$185,081	1.0
12. Leadership in Engineering Advancement, Diversity and Retention (LEADR)	\$52,950	.00
Misc. operating expenses (endowed accts, etc.)	\$286,460	
<b>TOTAL RECURRING EXPENSES IN DEAN'S OFFICE</b>	<b>\$11,478,889</b>	<b>68.95</b>

## ONE TIME OR LIMITED TIME EXPENSES (KNOWN)

Faculty Retentions	\$224,113
POP	\$16,842
Cost Sharing/Matching/Bridging from Graduate Funds	\$300,322
Cost Sharing/Matching/Bridging from other Dean's Office Funds	\$207,027
Dean's research expenses	\$100,121
Spafford lease	\$787,000
Various renovations	\$500,000
Graduate studies (Diversity Officer)	\$21,750
Start Up Likely to be Paid Out in 2018-19	\$2,870,208

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<b>TOTAL ONE TIME OR LIMITED TIME EXPENSES</b>	<b>\$5,027,383</b>
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<b>TOTAL EXPENDITURES</b>	<b>\$43,066,413</b>
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<b>PROJECTED BALANCE</b>	<b>\$3,011,435</b>
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**REMAINING START UP COMMITMENTS TO BE PAID OUT AFTER 2018-19  
(FIRM) (not including new hires in 2018-19)**

**\$4,605,949**

**SUMMARY FY 2018-19**

<b><u>2018-19 PROJECTED SOURCES</u></b>	<b>AMOUNT</b>	<b><u>TOTAL</u></b>	<b><u>AMOUNT FOR STRUCTURAL (-) or +</u></b>
PRIOR YEAR CARRYFORWARD	\$ 4,605,453		<del>\$ 4,605,453</del>
TOTAL BASE & RECURRING FUNDING	\$ 37,752,245		\$ 37,752,245
TOTAL ONE TIME OR LIMITED TIME SOURCES	\$ 3,720,150		<del>\$ 3,720,150</del>
TOTAL SOURCES AVAILABLE FOR 2018-19		\$46,077,848	\$ 37,752,245
<b><u>2018-19 PROJECTED EXPENDITURES</u></b>			
TOTAL RECURRING EXPENSES TO OTHER CAMPUS UNITS	\$ 2,295,626		\$ 2,295,626
TOTAL RECURRING EXPENSES TO DEPARTMENTS	\$ 24,264,515		\$ 24,264,515
DEAN'S OFFICE OPERATIONAL UNITS/OTHER OPERATING	\$ 11,478,889		\$ 11,478,889
ONE-TIME OR LIMITED TIME EXPENSE (FIRM COMMITMENTS)	\$ 5,027,383		<del>\$ 5,027,383</del>
OTHER RECURRING COMMITMENTS			\$ -
TOTAL EXPENDITURES		\$43,066,413	\$ 38,039,030
PROJECTED CARRYFORWARD BALANCE		\$3,011,435	
STRUCTURAL (DEFICIT) SURPLUS			\$ (286,785)



# Carry Forward Balances

Description	7/1/15	%	7/1/16	%	7/1/17	%	Proj 7/1/18	
Dean's Office	\$12.9m	32%	\$8.2m	20%	\$5.9m	16%	\$4.9m	13%
Departments	\$8.3m	21%	\$10.3m	25%	\$7.8m	21%	\$8.0m	22%
Faculty	\$18.4m	47%	\$22.2m	55%	\$23.9m	63%	\$24.3m	65%
TOTAL	\$39.6m	100%	\$40.7m	100%	\$36.7m	100%	\$37.2m	100%

Carry forward balances in departments range from ~\$350K to \$2.7M

# COE – Indirect Cost Return Policy Change for FY 18-19

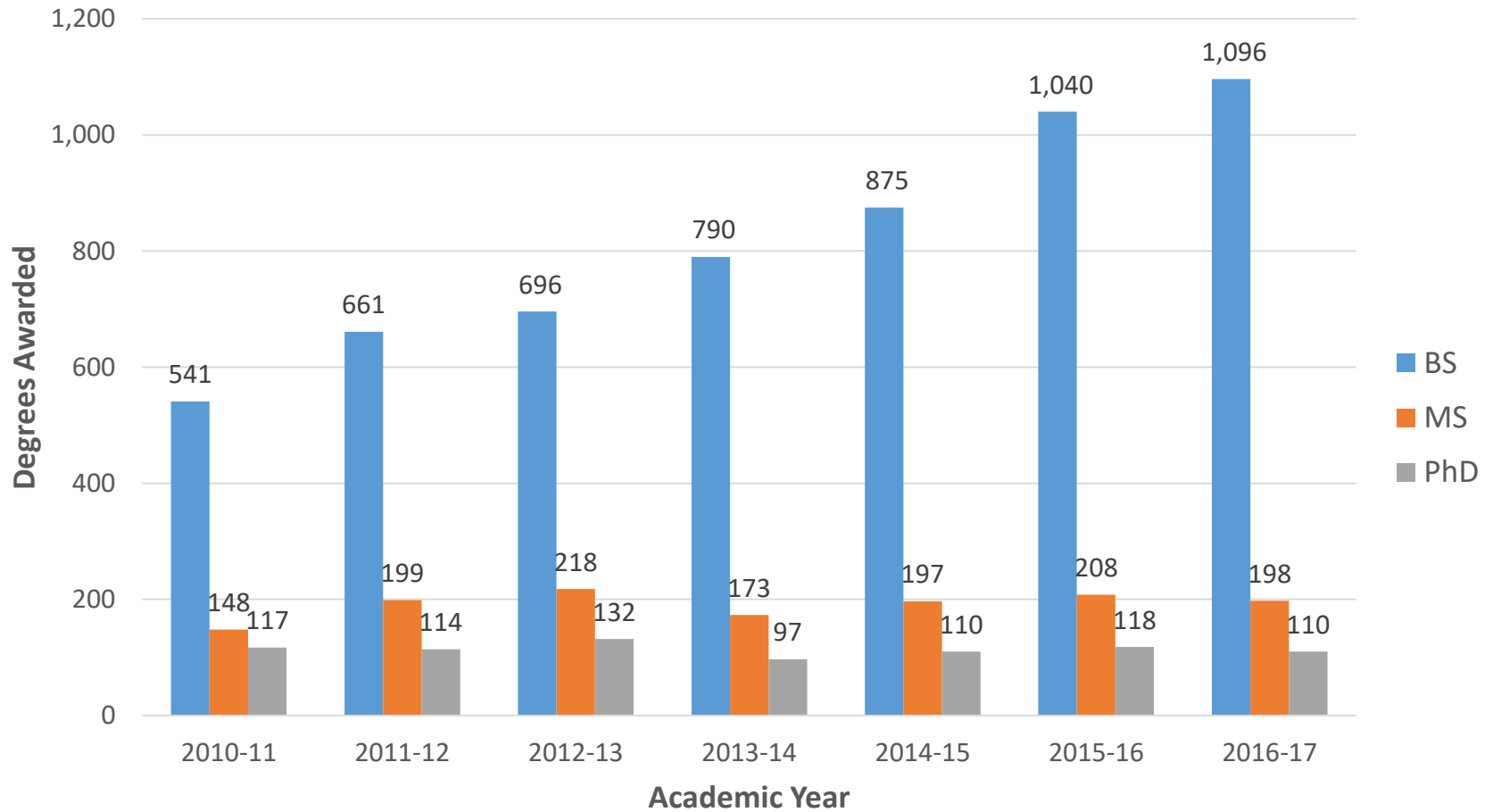
<u>Description</u>	<u>Campus %</u>	<u>COE %</u>	<u>Dept %</u>	<u>PI %</u>
FY 16-17 (Baseline - before FY 17-18 distribution change)	63.00%	25.00%	10.00%	2.00%
FY 17-18 (no change for Dept and PI as COE absorbed entire 3% reduction)	66.00%	22.00%	10.00%	2.00%
FY 18-19 (COE and Dept to absorb 3% reduction from FY 17-18 – COE one year lag on implementation – PI will not be impacted)	66.00%	22.86%	9.14%	2.00%

# Sources of Funding

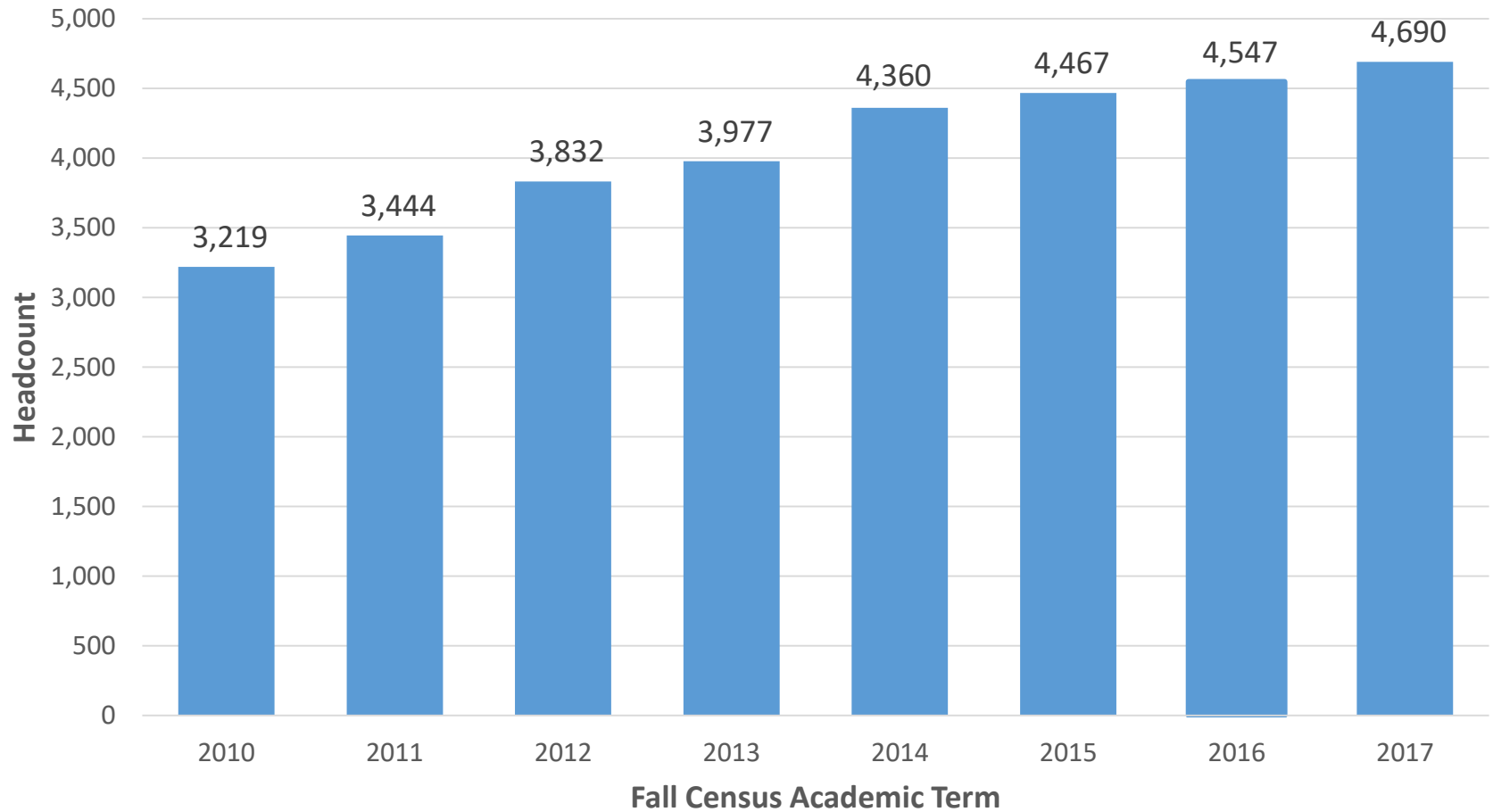
- Fundraising
- Participate in Master's Enrollment Incentive Program
  - Each non-resident MS will give \$9K to department (\$3K for resident)
  - For example, class of 50 students will more than cover additional costs
  - Source of outstanding PhD students
  - Most effective way to recruit students if MS offered is a one year, non-thesis MS, such as non-thesis MS CHE, non-thesis MS MAE, etc.
- Distance Learning and Certificate Programs
- Increasing research activity generating ICR
- Increase SCH through a large enrollment general elective course like Design of Coffee
- Increase CNM2 revenue

# Number of Graduates

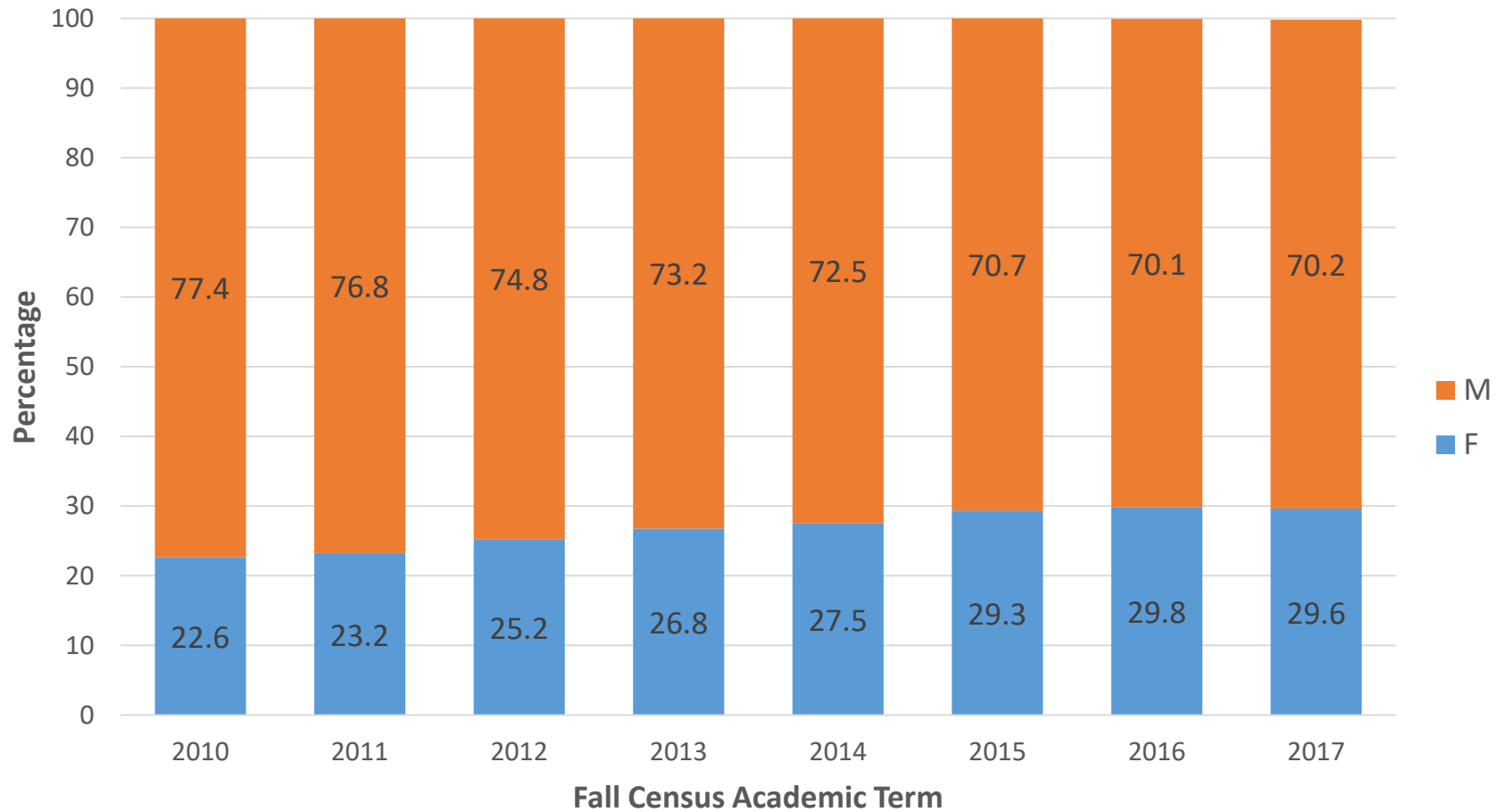
UG Mean Time to Degree = 4.20 years



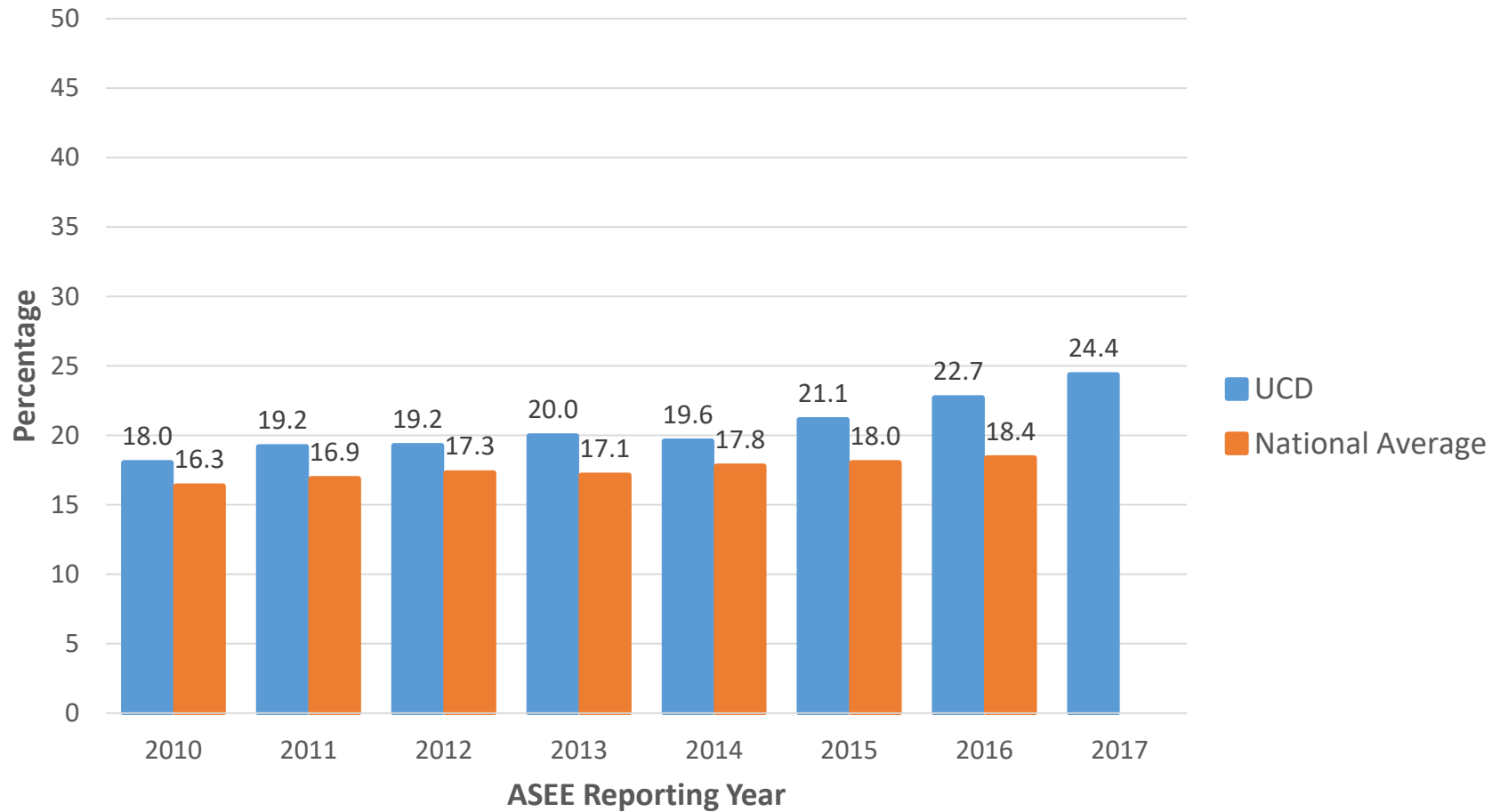
# UG Enrollment: College of Engineering



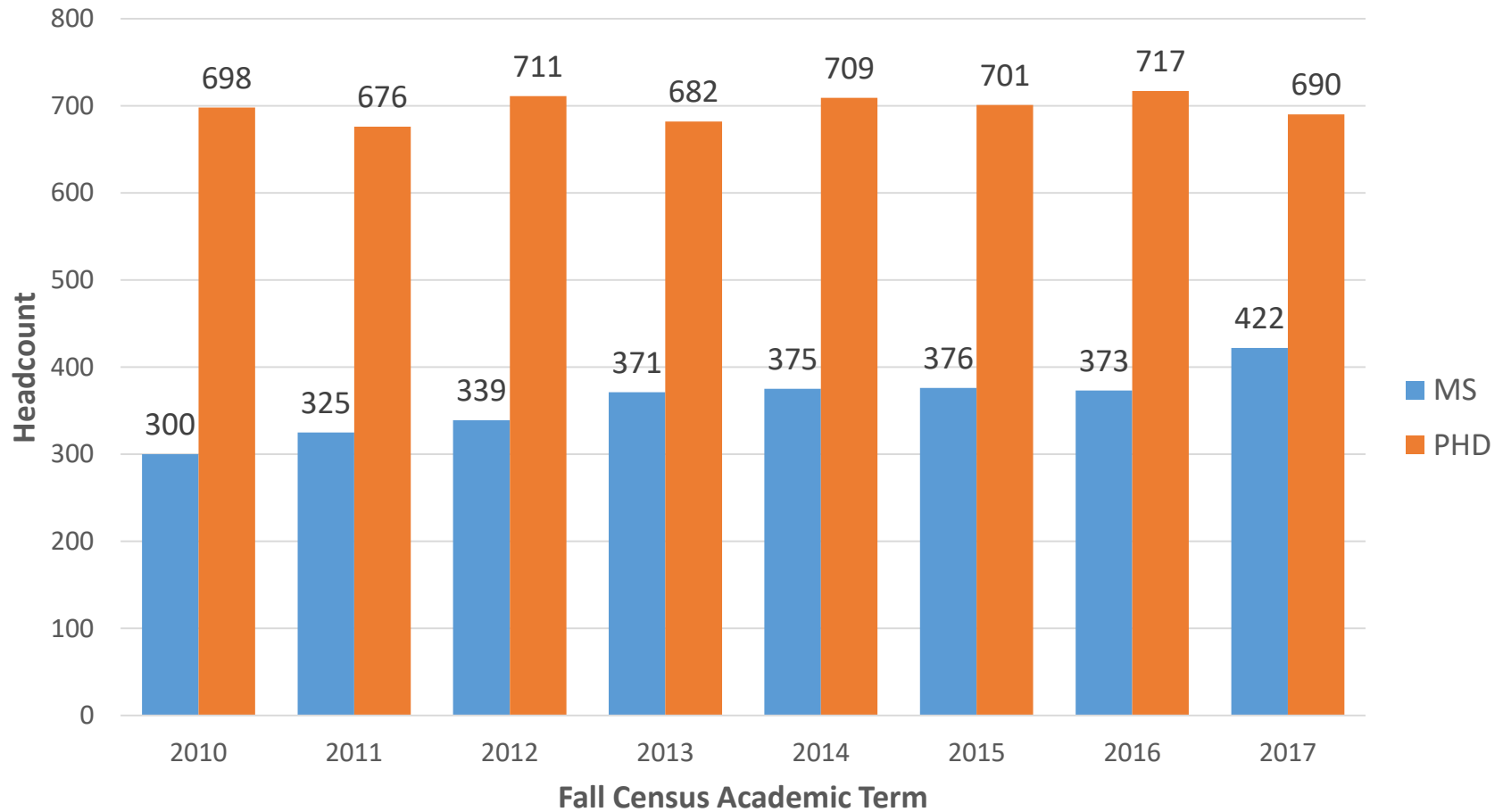
# UG Enrollment: Gender



# UG Enrollment: Underrepresented Minority (URM) among Domestic Students

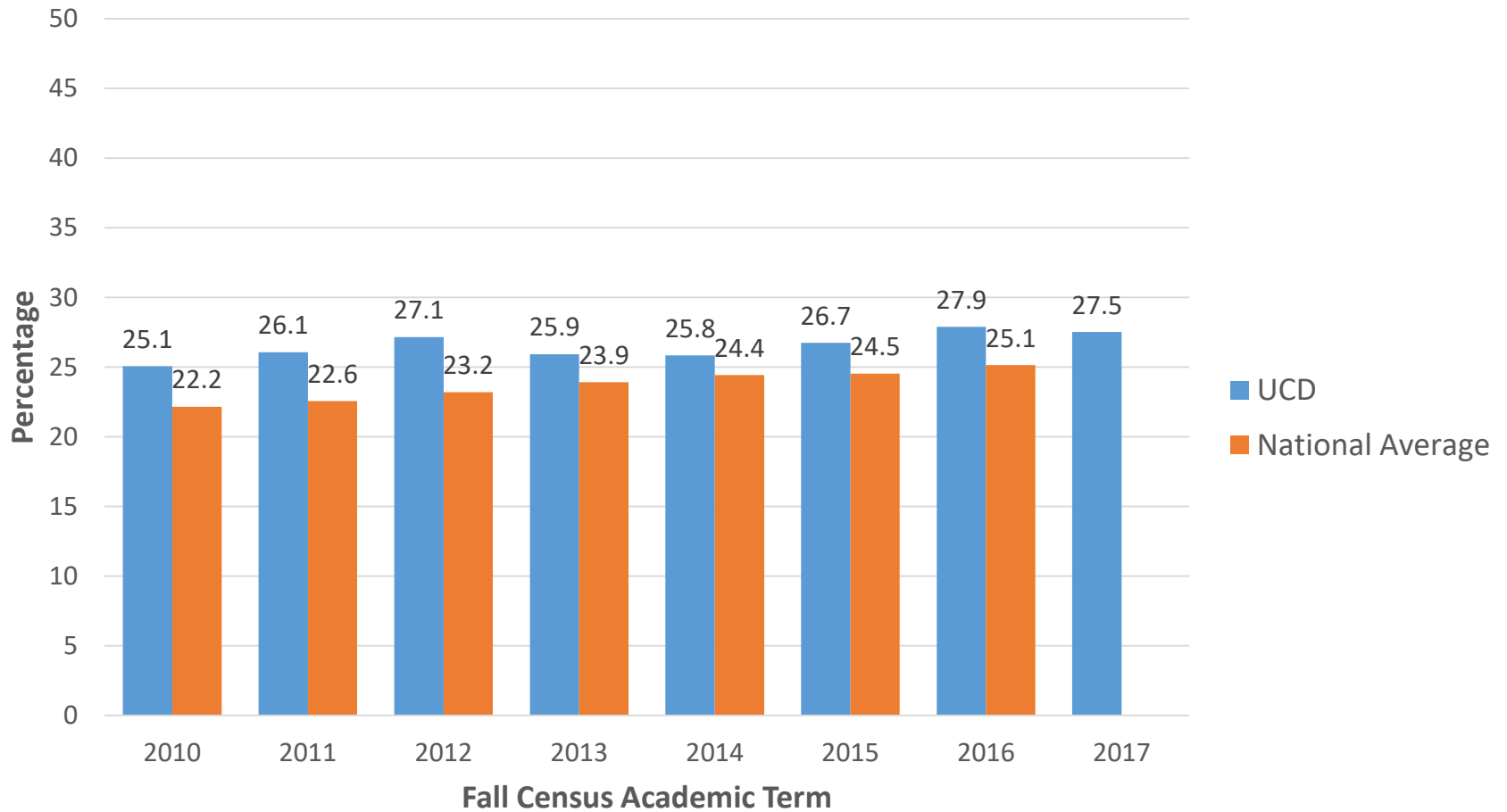


# Graduate Enrollment: College of Engineering

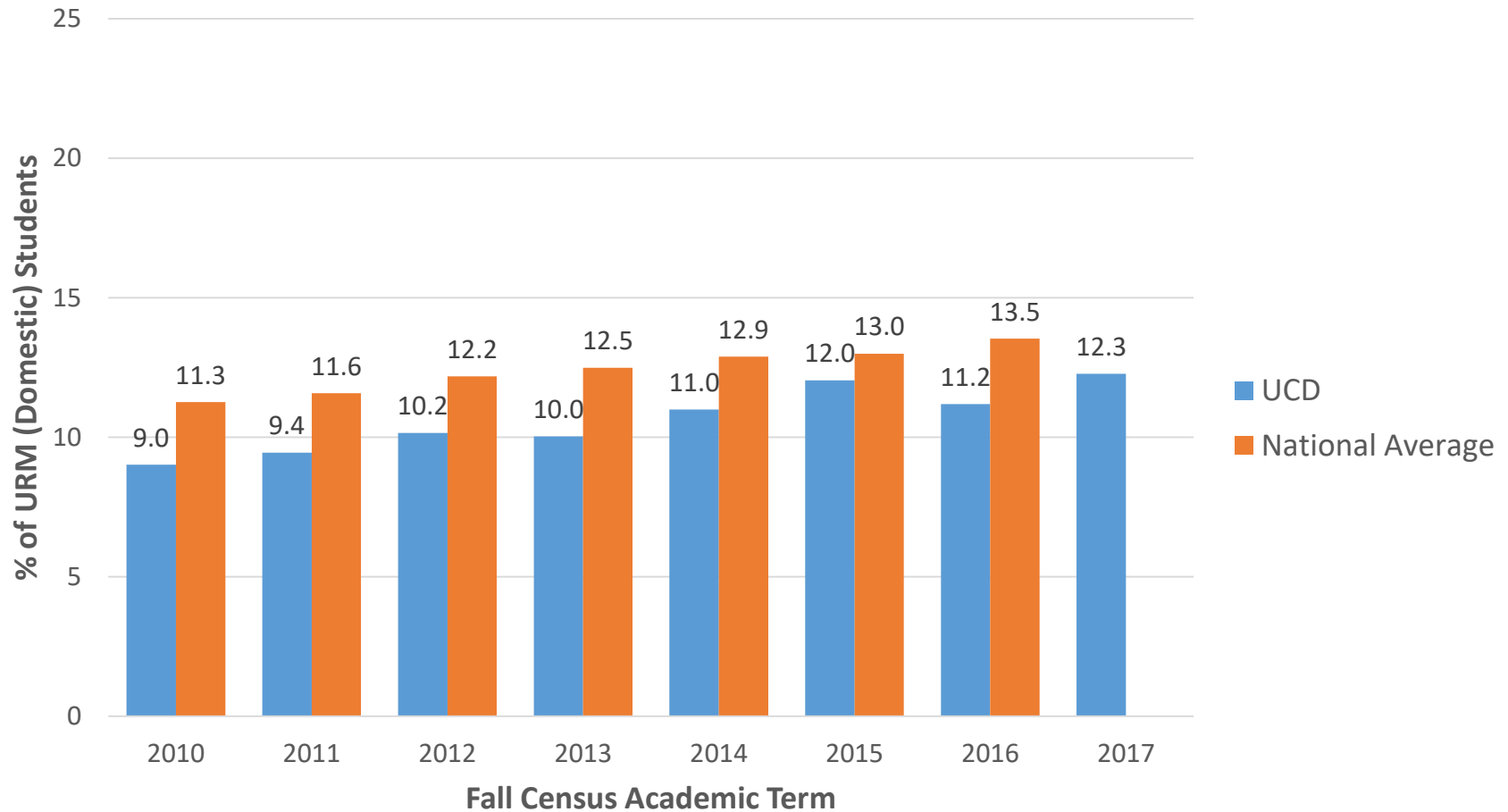




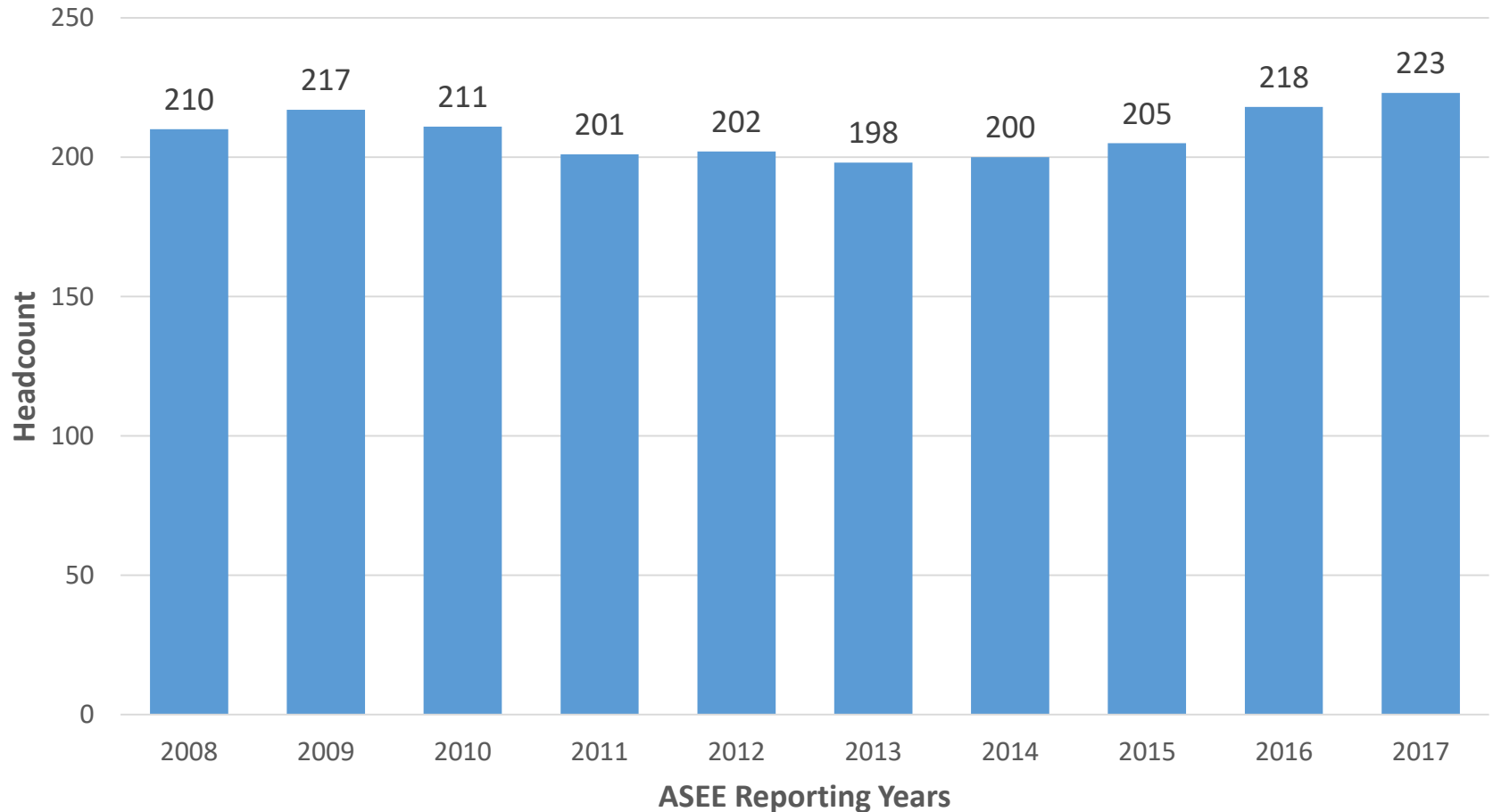
# Graduate Enrollment: Female Students



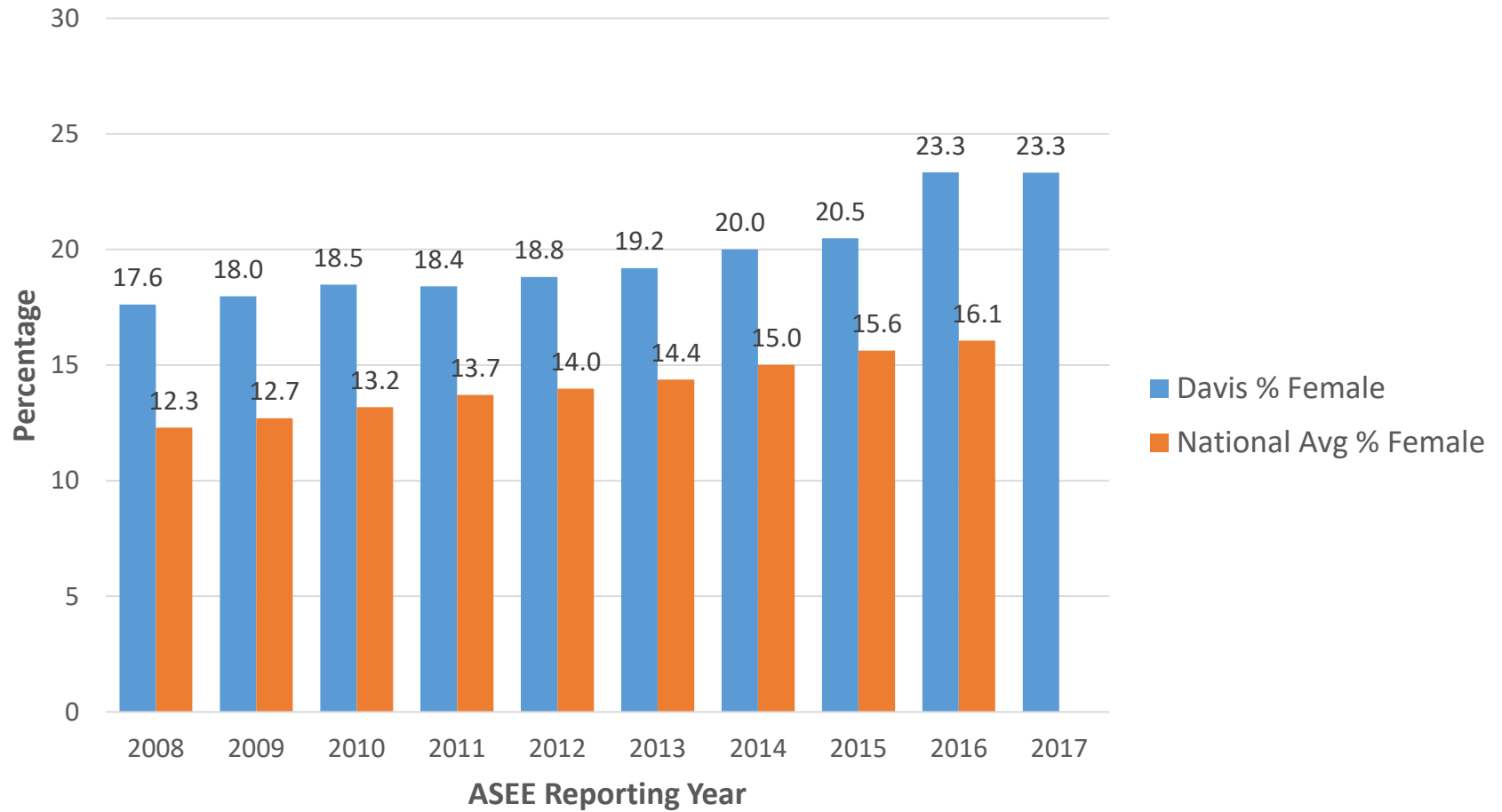
# Graduate Enrollment: URM among Domestic Students



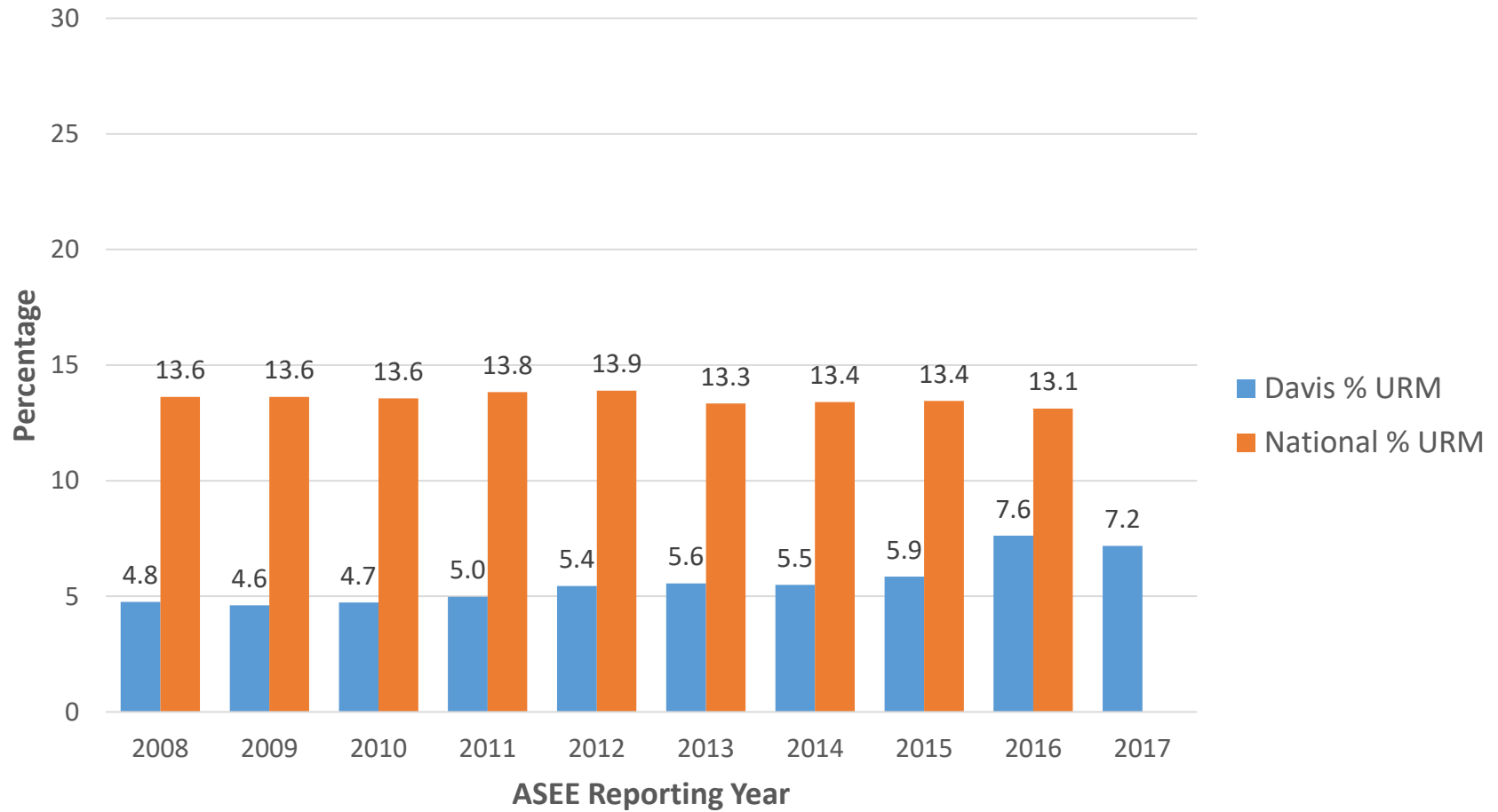
# Faculty: COE Faculty Headcount



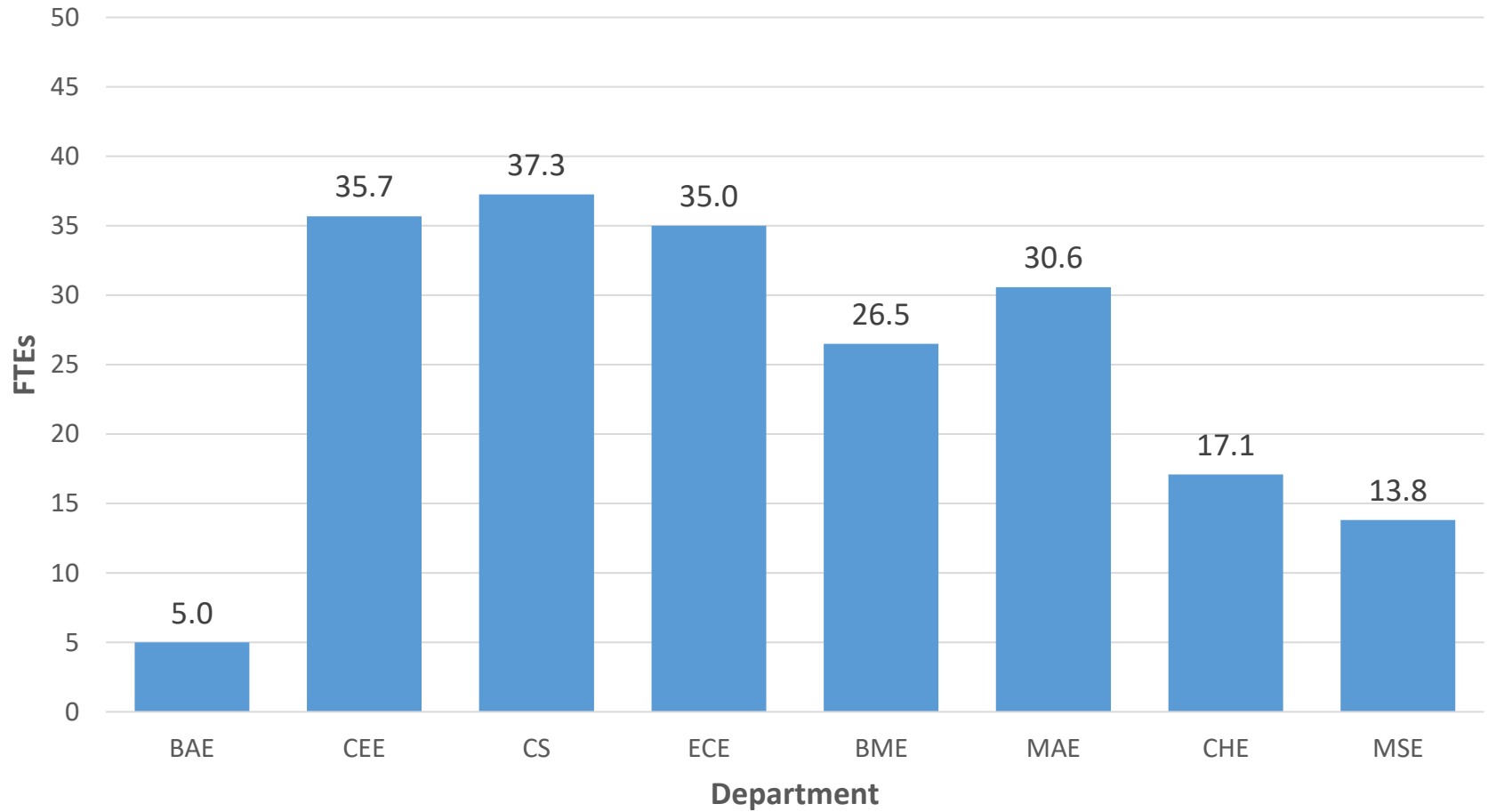
# Faculty: Percentage of Women Faculty



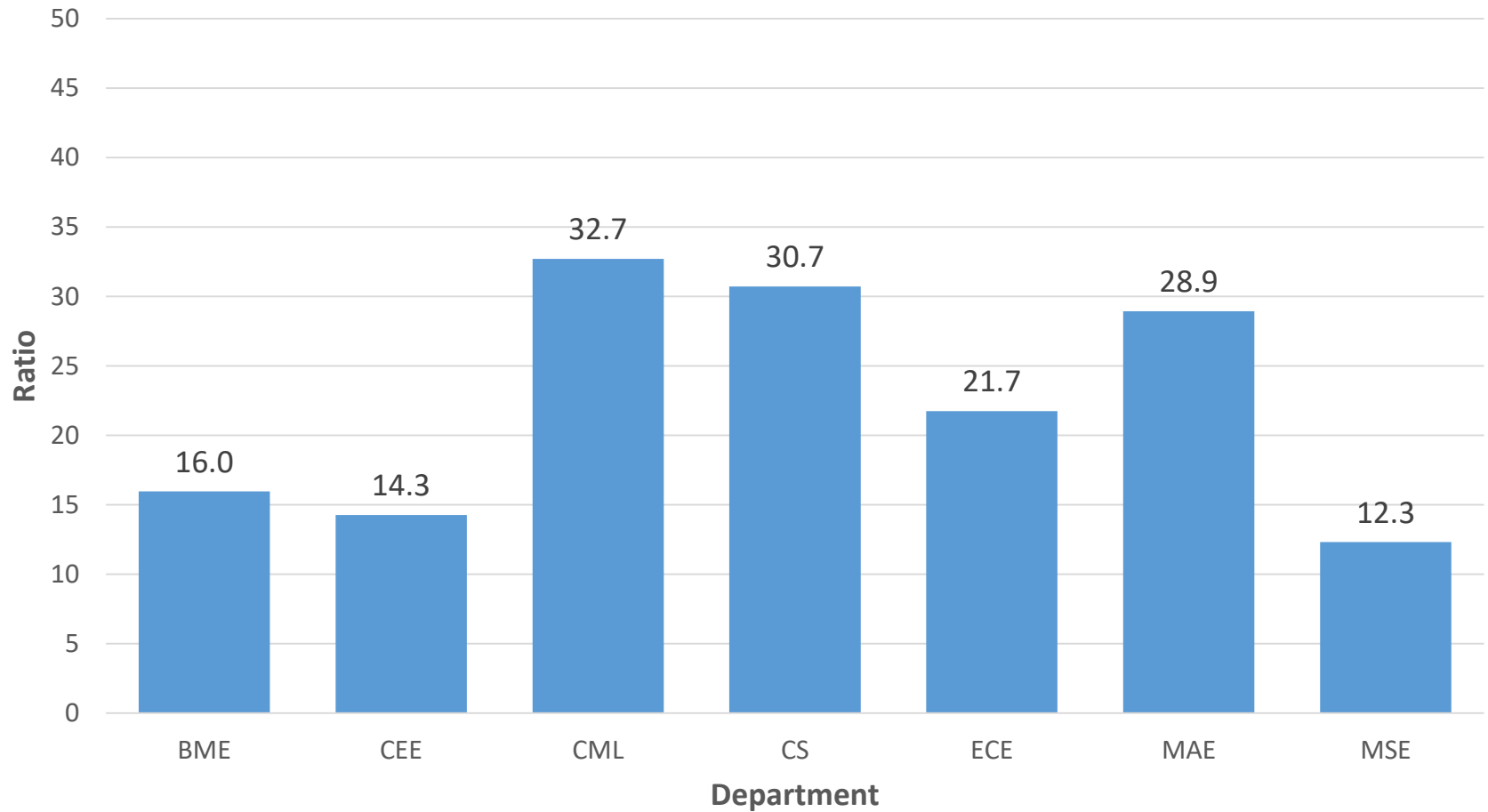
# Faculty: Percentage of URM Faculty



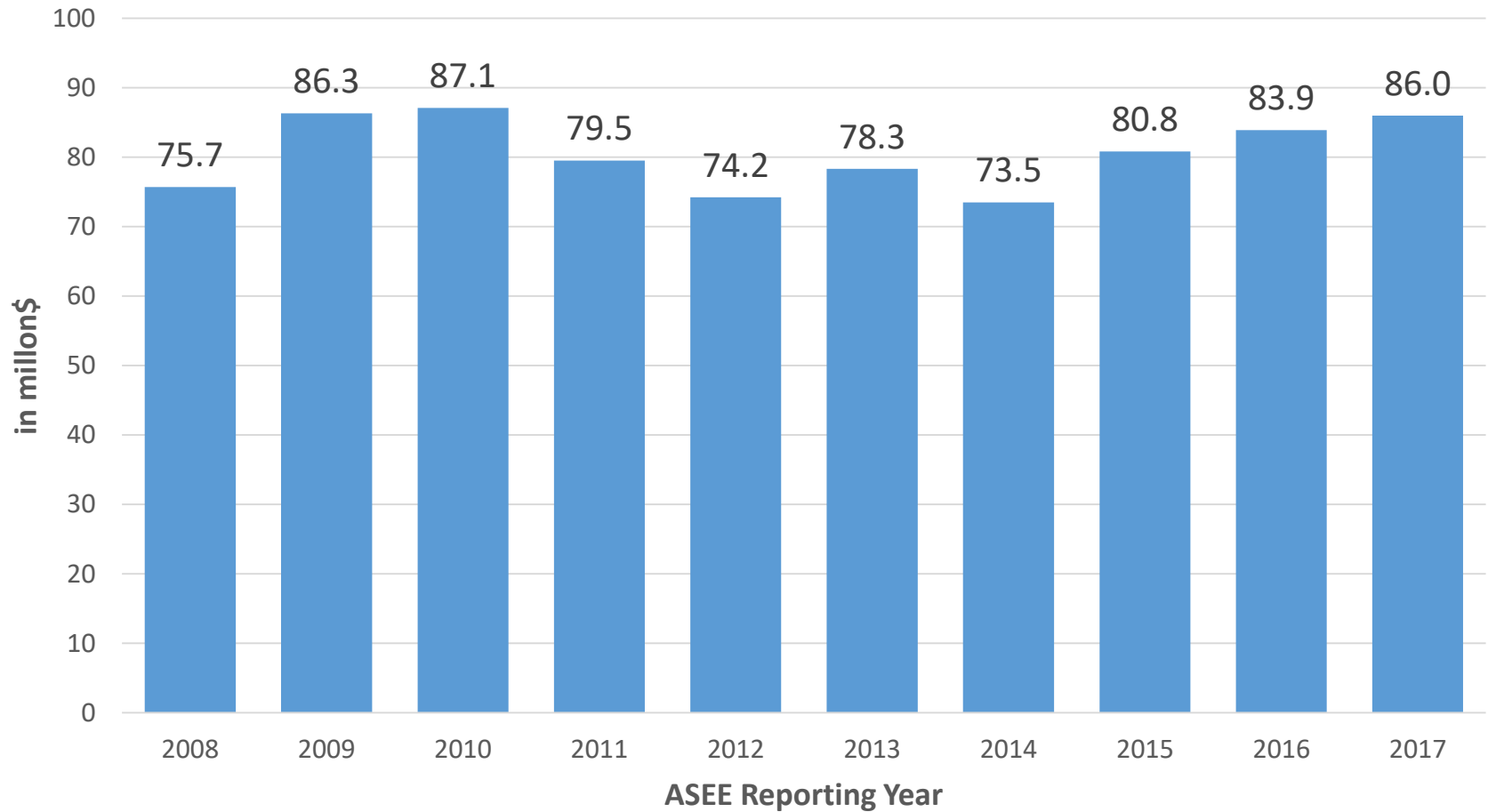
# Faculty: Current FTEs by Department



# Faculty: Fall 2017 Student Enrollment to Current FTE Ratio

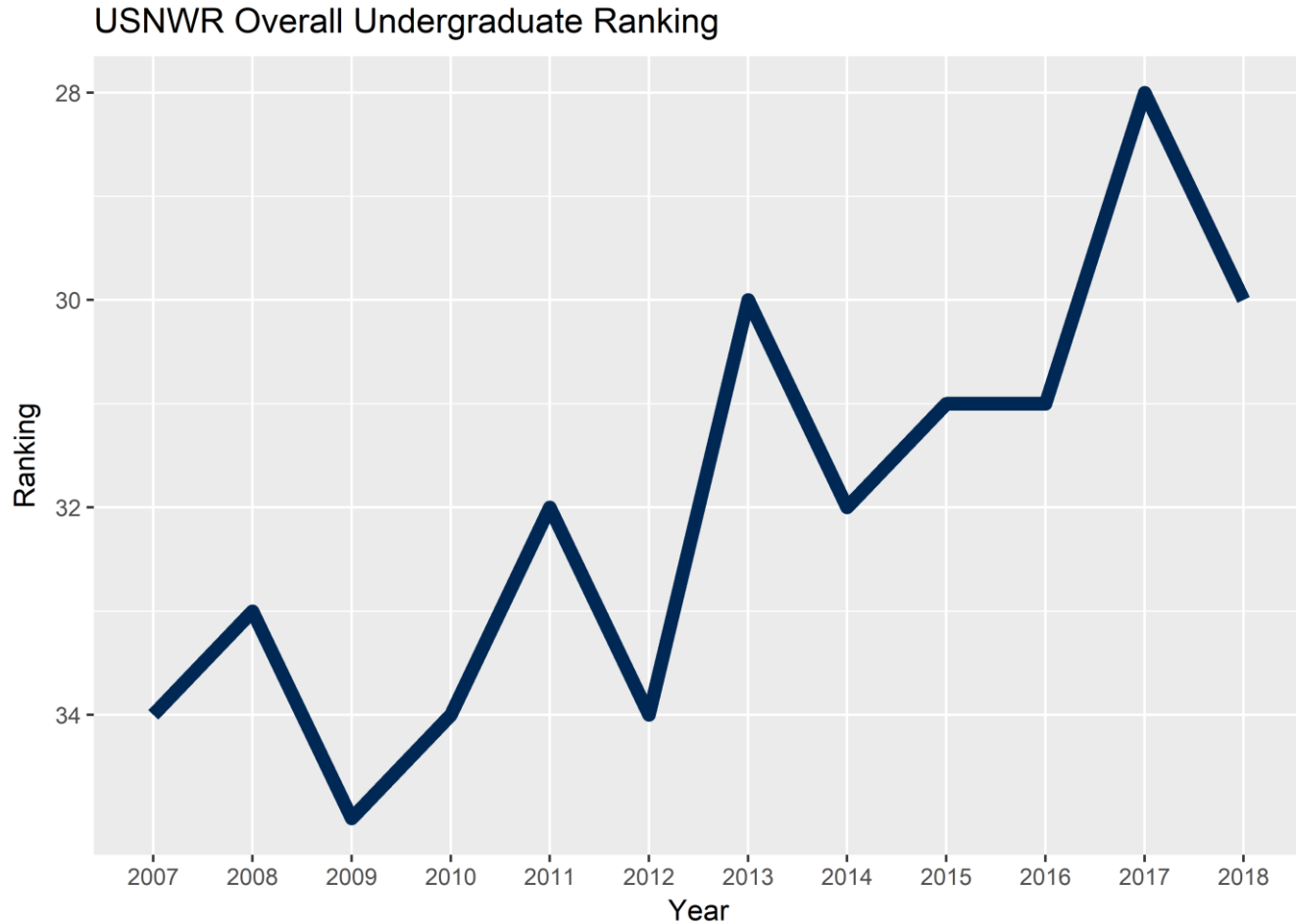


# Research Expenditures (in M\$) Reported to ASEE

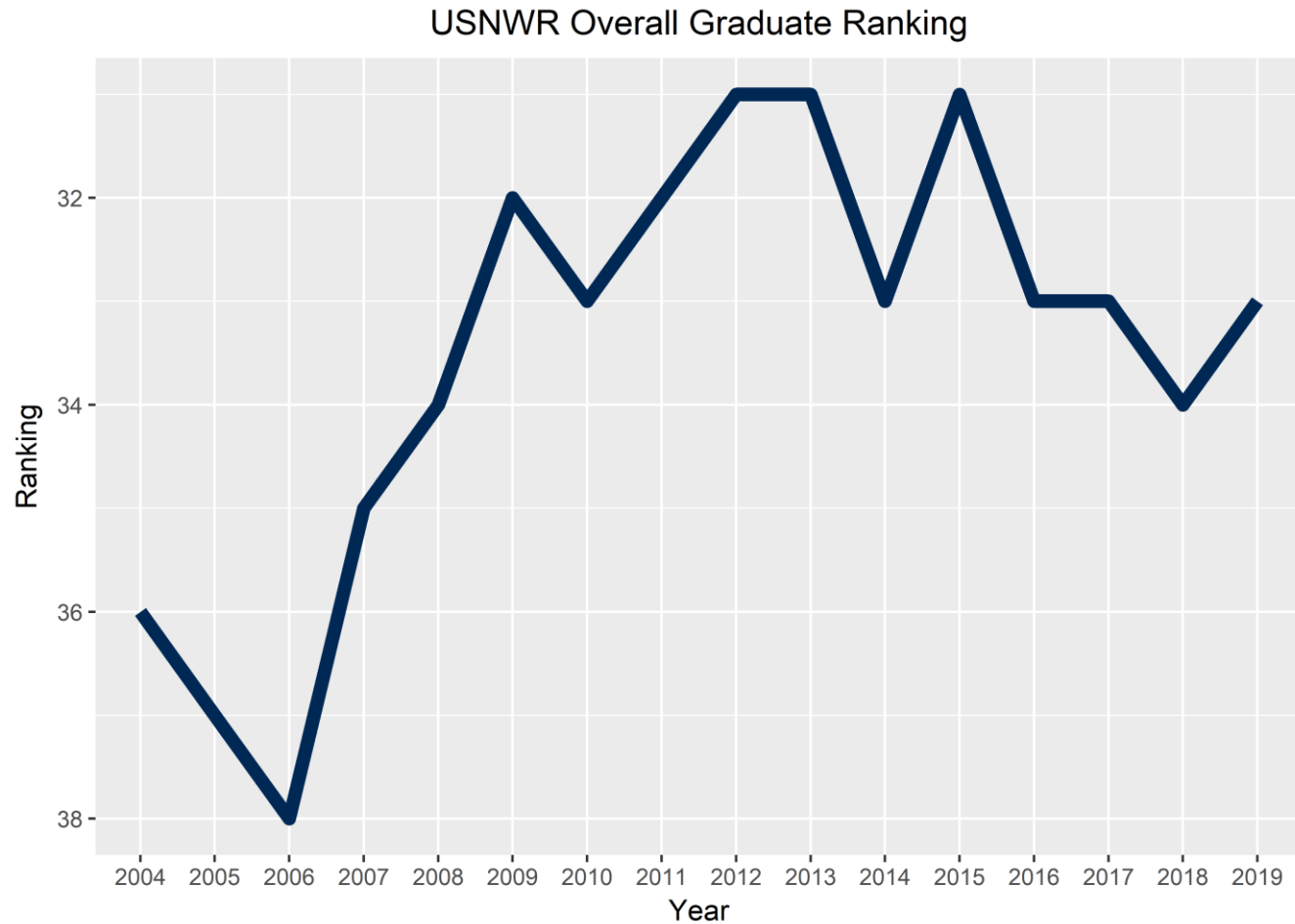




# Undergraduate US News & World Report Ranking



# Graduate US News & World Report Ranking



# Best Graduate Engineering Overall Rankings

- #1 Massachusetts Institute of Technology
- #2 Stanford University
- #3 University of California—Berkeley
- #4 California Institute of Technology
- #4 University of Michigan—Ann Arbor
- #6 Carnegie Mellon University
- #7 Purdue University—West Lafayette
- #8 Georgia Institute of Technology
- #9 University of Illinois—Urbana-Champaign
- #10 University of Southern California (Viterbi)
- #10 University of Texas—Austin (Cockrell)
- #12 Columbia University (Fu Foundation)
- #12 Texas A&M University—College Station
- #12 University of California—San Diego (Jacobs)
- #15 Cornell University
- #16 University of California—Los Angeles
- #17 Princeton University
- #18 Johns Hopkins University (Whiting)
- #18 University of Pennsylvania
- #20 Northwestern University (McCormick)
- #20 University of Wisconsin—Madison
- #22 Harvard University
- #22 University of Maryland—College Park (Clark)
- #24 North Carolina State University
- #24 University of California—Santa Barbara
- #26 Duke University (Pratt)
- #26 University of Washington
- #28 University of Minnesota—Twin Cities
- #29 Ohio State University
- #30 Rice University (Brown)
- #30 Virginia Tech
- #32 University of Colorado—Boulder
- #33 Pennsylvania State University—University Park
- #33 University of California, Davis**

# US News and WR

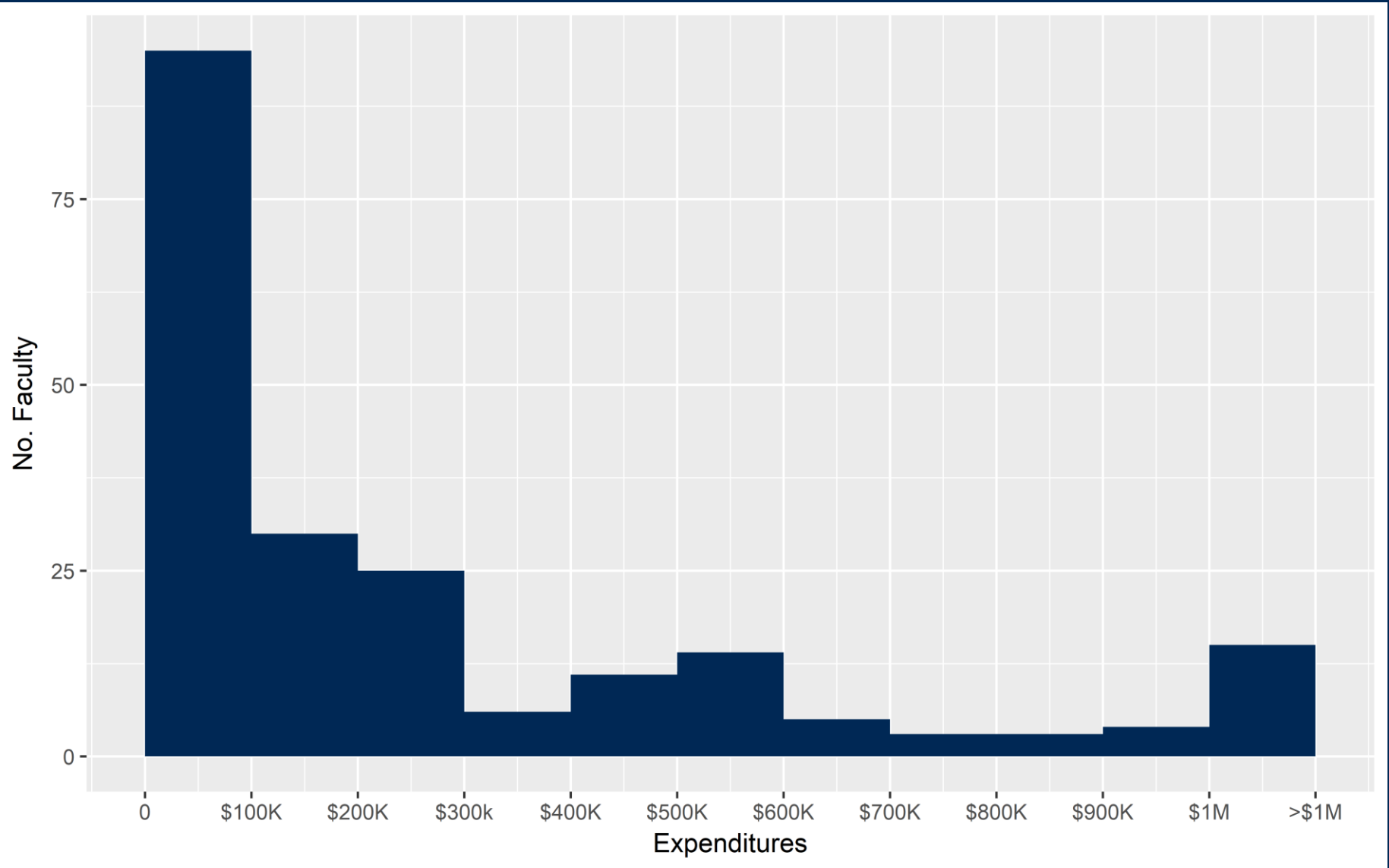
## Department Methodology

Programs and Specialties	2019 Rank	2019 Score	2018 Rank	2018 Score
Biological/Agricultural Engineering	7	3.9	8	3.8
Civil Engineering	11	3.8	12	3.8
Environmental Engineering	13	3.5	15	3.4
Electrical/Communications Engineering	35	3.3	42	3.1
Materials Engineering	30	2.9	35	2.8
Computer Engineering	31	3.2	36	3.2
Biomedical Engineering/Bioengineering	21	3.6	25	3.3
Chemical Engineering	30	3.1	25	3.2
Aero/Astronautical Engineering	23	2.9	23	3.2
Mechanical Engineering	35	3.2	36	3.1

**Highest Ranked**

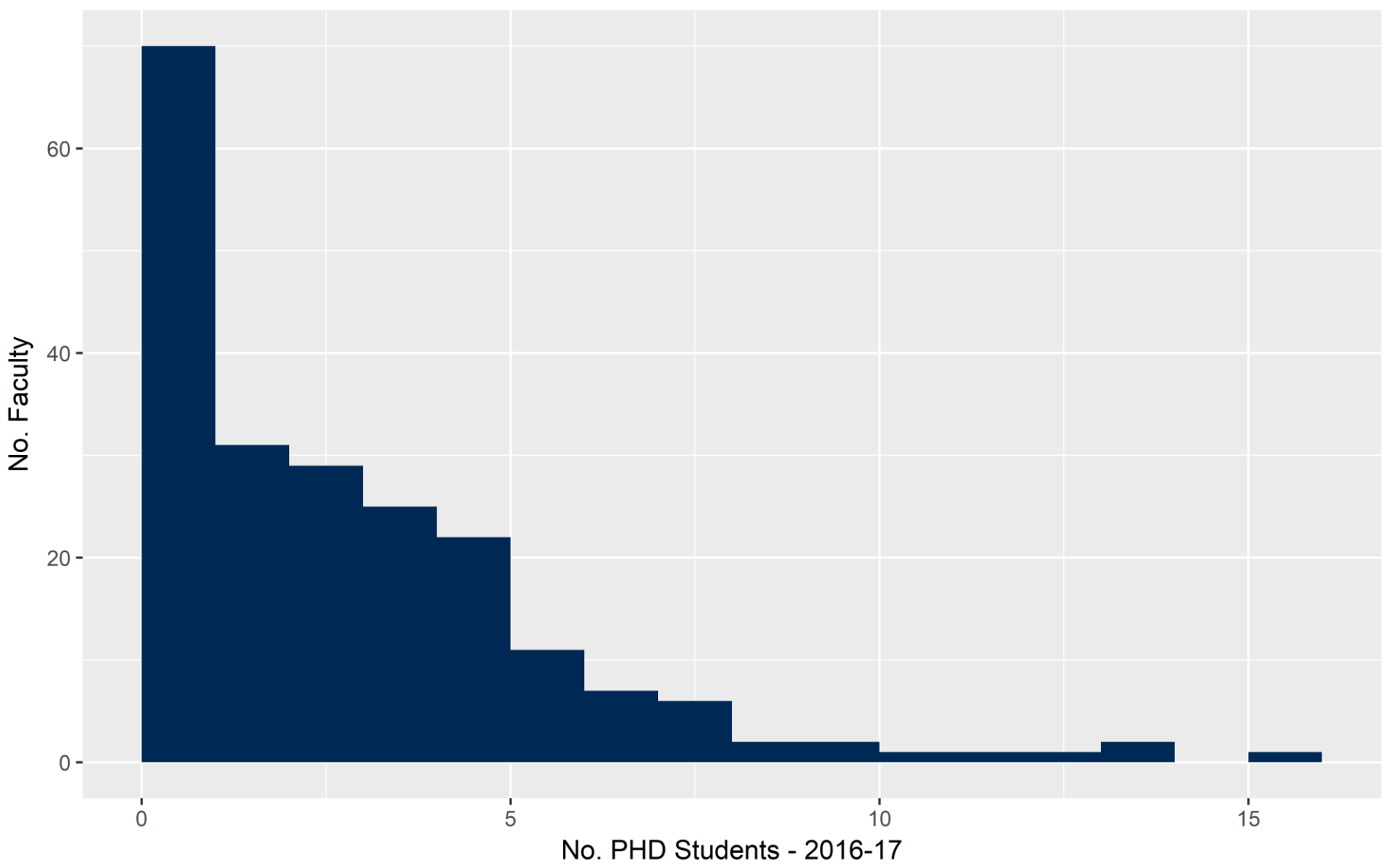
**Biggest Gains**

# Expenditures Per Faculty



**51 Full/Associate Professors less than \$100K per year**

# PhDs Per Faculty



**32 Full/Associate Professors have 0 PhD Students**

# Engineering Undergraduate Office

- Salary = \$ 832,467
- Benefits = \$ 342,147
- Expenses = \$ 55,802
- Total = \$ 1,230,416

FTE = 10.85

- Jim Schaaf, Associate Dean (0.85 FTE)
- David Spight
- Mayra Zamora
- Mary Ramirez
- Tanya Culliver-Whitlow
- Jordan Dade
- Lili Mirshahzadeh
- Shadaya Litt
- Nancy Davis
- Laura Hackett
- Natasha Coulter

# Engineering Shared Services HR/Payroll and Purchasing

- Salary = \$ 738,150
- Benefits = \$ 374,971
- Expenses = \$ 15,902
- Total = \$ 1,129,023

FTE = 11.1

- Lisa Gaby
- Melanie Christensen
- Denise Bray
- Melanie Burt-Schipke
- Lucy Whyte
- Pia Flory
- Theresa Mcwayne
- Irma Cerna
- Kathy Sanchez
- Nikki Nguyen
- Maryann Chavez
- Jeff Adams (.10 FTE)



# Information Technology

- Salary = \$ 1,075,201
- Benefits = \$ 432,178
- Expenses = \$ 834,213
- MOU Funding = \$ (253,000)
- Total = \$ 2,088,592

FTE = 9.0

- Steve Pigg
- Ken Jones
- Babak Moghadam
- Dean Bunn
- Heidi Arnold
- Jason Fearing
- Ben Clark
- John Kralik
- Miriam McDonald

# Dean's Office Administration

- Salary = \$ 879,318
- Benefits = \$ 270,370
- Expenses = \$ 29,700
- Total = \$ 1,179,388

FTE = 4.5

- Jennifer Curtis, Dean
- Felix Wu, Associate Dean (.50 FTE)
- Jessie Catacutan, Assistant Dean
- Manju Kaul
- De Doan

# Development

- Salary = \$ 953,562
- Benefits = \$ 364,738
- Expenses = \$ 119,044
- Total = \$ 1,437,344

FTE = 10.0

- Melinda Seevers, Assistant Dean
- James Hale
- Alison Metzger-Jones
- Sarah Hodge
- Janel Alpert
- Lamia Hajani
- Four vacant slots (1.0 FTE each)

# Research and Graduate Studies

- Salary = \$ 256,396
- Benefits = \$ 76,191
- Expenses = \$ 24,408
- Total = \$ 356,996

FTE = 1.75

- Jean VanderGheynst, Associate Dean (0.75 FTE)
- Alin Wakefield (1.00 FTE)

# Facilities

- Salary = \$ 598,926
- Benefits = \$ 242,079
- Expenses = \$ 76,210
- Total = \$ 917,215

FTE = 4.75

- Case van Dam, Associate Dean (0.75 FTE)
- Justin Hall
- Scott Cooling
- Policy and Project Director (vacant)
- Stephani Shone

# Student Design Center (formerly EFL)

- Salary = \$ 371,466
- Benefits = \$ 163,955
- Expenses = \$ 52,814
- Total = \$ 588,235

FTE = 4.0

- Mike Akahori
- David Kehlet
- Shawn Malone
- Sherry Batin

# Administrative Support

- Salary = \$ 195,807
- Benefits = \$ 99,862
- Expenses = \$ 7,830
- Total = \$ 303,499

FTE = 3.0

- Carrie Chown
- Elsa Rojas-Perez
- Rachel Geier

# Marketing and Communications

- Salary = \$ 281,362
- Benefits = \$ 132,110
- Expenses = \$ 172,850
- Total = \$ 586,322

FTE = 3.0

- Aditi Risbud Bartl
- Bonnie Dickson
- Francesca Ross



# CNM2

## Center for Nano and Micro Manufacturing

- Salary = \$ 542,916
- Benefits = \$ 244,634
- Expenses = \$ 349,818
- Total = \$ 1,137,368

FTE = 6.0

- Ryan Anderson
- Ed Myers
- Yusha Bey
- Vacant (Rijuta Ravichandran)
- Chan Ho Kim
- Paula Lee

# Student Startup Center

- Salary = \$ 119,589
- Benefits = \$ 50,101
- Expenses = \$ 15,391
- Total = \$ 185,081

FTE = (1.0) and Student Staff

- Liz Tang

# Leadership in Engineering Advancement, Diversity and Retention (LEADR)

- Salary = \$ 7,000
- Benefits = \$ 105
- Expenses = \$ 45,845
- Total = \$ 52,950

FTE = (0.00) – Student Staff

# Order of Business continued...

4. Special orders (none)
5. Reports of Special Committees (none)
6. Reports of Standing Committees (slides to follow)

# Reports from Standing Committees

Awards Committee

Michael Zhang, Chair

Committee on Graduate Study

Chris Cappa, Chair

Committee on Information Technology and Innovation Services

Matt Bishop, Chair

# Reports from Standing Committees continued...

Committee on Student Recruitment, Development and Welfare  
Dawn Cheng, Chair

Committee on Undergraduate Educational Policy  
Tony Passerini, Chair

# Order of Business continued...

7. Petitions of students (none)
8. Unfinished business (none)
9. New business (none)

# COE Standing Committees 2017/18

## AWARDS COMMITTEE

Mark Grismer	BAE
Alyssa Panitch	BME
John Bolander	CEE
Spyros Tseregounis	CHE
Biswanath Mukherjee	CS
Rajeevan Amirtharajah	ECE
Mohamed Hafez	MAE
Subhash Mahajan	MSE



# COE Standing Committees 2018/19

## FACULTY EXECUTIVE COMMITTEE

Ken Giles	BAE
Laura Marcu (Chair)	BME
Jason DeJong	CEE
Marjorie Longo	CHE
Francois Gygi	CS
Chen-Nee Chuah	ECE
Nesrin Sarigul-Klijn	MAE
Subhash Risbud	MSE

# COE Standing Committees 2018/19

## COMMITTEE ON GRADUATE STUDY

Niels Jensen	DAS
Ruihong Zhang	BAE
David Hawkins	BME
Chris Cappa	CEE
Karen McDonald	CHE
Susan Handy	TTP
TBD	CS
Khaled Abdel-Ghaffar	ECE
Cristina Davis	MAE
Yayoi Takamura	MSE

# COE Standing Committees 2018/19

## COMMITTEE FOR INFORMATION TECHNOLOGY & INNOVATION SERVICES

David Slaughter	BAE
Yong Duan	BME
Mike Kleeman	CEE
Roland Faller	CHE
Matt Bishop	CS
Venkatesh Akella	ECE
Seongkyu Lee	MAE
Klaus van Benthem	MSE

# COE Standing Committees 2018/19

## RESEARCH & LIBRARY COMMITTEE

Stavros Vougioukas	BAE
TBD	BME
Bassam Younis	CEE
Adam Moule	CHE
Yong Jae Lee	CS
Leo Liu	ECE
Masakazu Soshi	MAE
Sabyasachi Sen	MSE

# COE Standing Committees 2018/19

## COMMITTEE ON STUDENT RECRUITMENT, DEVELOPMENT & WELFARE

Julia Fan	BAE
Marc Facciotti	BME
Dawn Cheng	CEE
Jason White	CHE
Nina Amenta	CS
Juan Sebastian Gomez-Diaz	ECE
Zhaodan Kong	MAE
Ricardo Castro	MSE

# COE Standing Committees 2018/19

## COMMITTEE ON UNDERGRADUATE EDUCATIONAL POLICY

Tina Jeoh	BAE
Jen Choi	BME
Jeannie Darby	CEE
Nael El-Farra	CHE
Patrice Koehl	CS
Josh Hihath	ECE
Ben Shaw	MAE
Susan Gentry	MSE

# Meeting Minutes

- Annual Faculty Meeting began at 3:010 p.m. and adjourned at 4:50 p.m.
- 34 COE faculty members attended the meeting