



School of Natural Sciences
All Hands Faculty Meeting
Dean Betsy Dumont
September 28, 2017

Update on Faculty Hiring

Successful AY 2016-17 Searches

Unit	Candidate	Rank	Start Date
CCB	Leslie, J. Michelle	LPSOE	7/1/2017
CCB	Nguyen, Son	Assistant Professor	7/1/2017
MATH	Theillard, Maxime	Assistant Professor	7/1/2017
MATH	Carvalho, Camille	Assistant Professor	7/1/2018
MCB	Grasis, Juris	Assistant Professor	1/1/2018
MCB	Amemiya, Chris	Professor	9/1/2017
LES	Kim, Sora	Assistant Professor	7/1/2018
LES	Ryals, Rebecca	Assistant Professor	1/1/2018
LES	Bennett, Gordon	Assistant Professor	1/1/2018

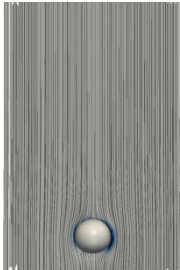
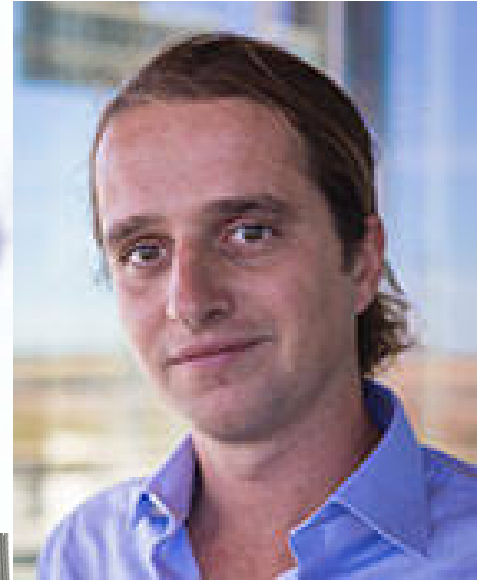
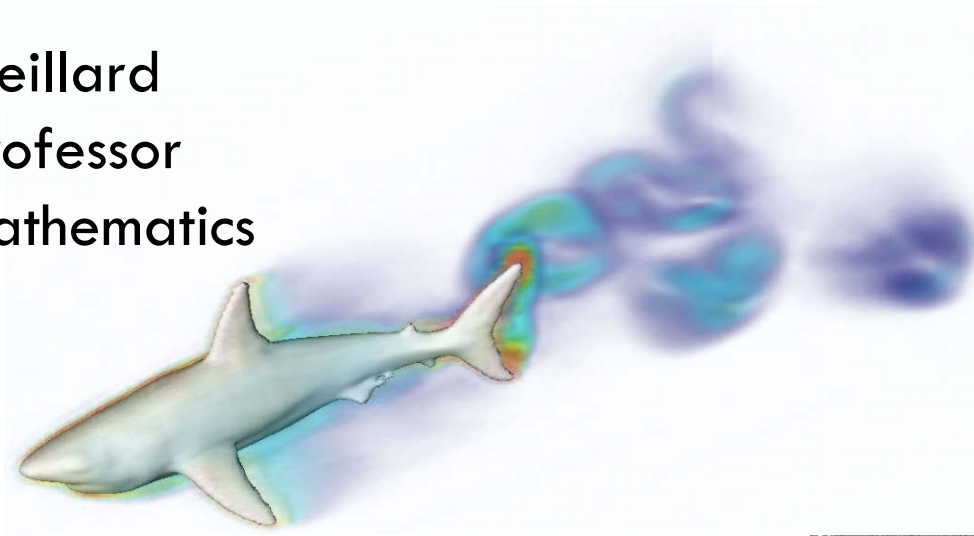
AY 2016-17 Foundational Searches Carried Forward

Unit	Rank	Status
MATH	Visiting Asst Prof	Two VAPs; Chair, Mayya Tokman
CCB	Assistant Professor	Open/Close: 8/23/2017 – 10/15/2017; Chair, Mike Colvin
MATH	Assistant Professor	Open/Close: 9/1/2017 – 11/1/2017; Chair, Francois Blanchette
CCB	Assistant Professor	On hold until AY 2018-19
MCB	Assistant Professor	MCB Unit to decide

3 AY 2016-17 SAFI Searches in Process – 2 in Physics, 1 in MCB

Welcome to Our New Faculty!

Maxime Theillard
Assistant Professor
Applied Mathematics

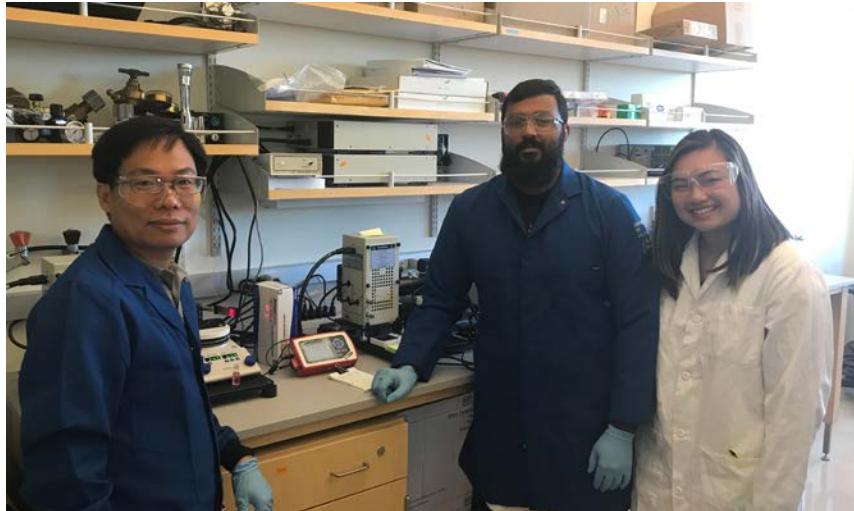


Applied Mathematics: Recent Accomplishments

- **Hosted** the second “Central Valley Regional SIAM Student Chapter Conference”
- **Harish Bhat** – NSF Grant
- **Roummel Marcia** – NSF Grant
- **Noemi Petra** – NSF Career Award, NSF, SIAM Grants
- **Suzanne Sindi** – NSF (2), Army, NIH Grants
- **Mayya Tokman** – NSF Grant
- **Arnold Kim** – AFOSR Grant

Welcome to our New Faculty!

Son Nguyen
Assistant Professor
Chemistry & Chemical Biology

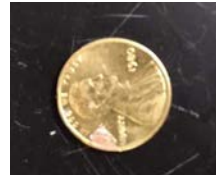
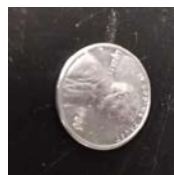
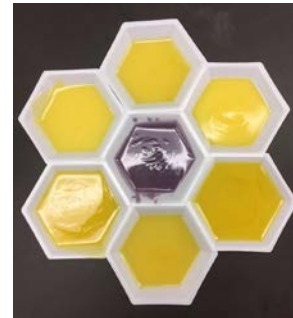


Welcome to our New Faculty!



Michelle Leslie
LPSOE
Chemistry & Chemical Biology

- Clockwise from top left: fresco making (calcium carbonate chemistry), soap making (lead soap formation in oil paintings), Prussian blue painting (precipitation reactions), “silver” and “gold” pennies (metal alloys).

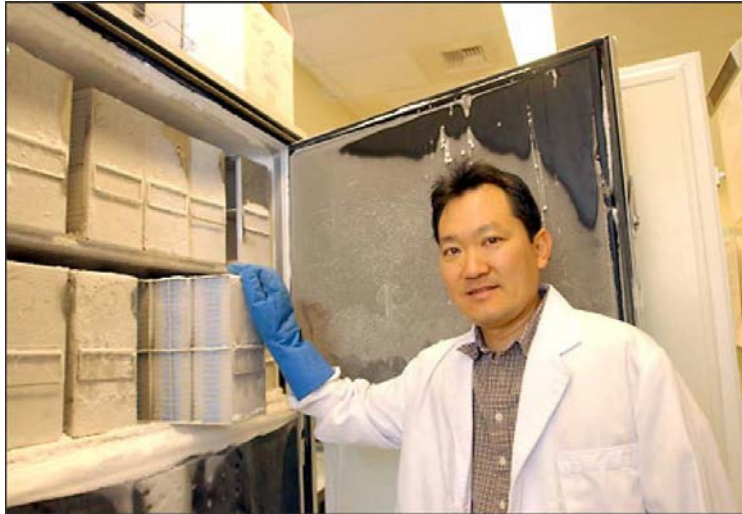


Chemistry and Chemical Biology: Recent Accomplishments

- **Andy LiWang** published a full length research article in Science. Also received \$2.9M in grants from NIH, Army, and AFOSR.
- **Anne Kelley** is this year's chair of the APS Division of Laser Science.
- **David Kelley** received a \$350,000 DOE grant.
- **Hrant Hratchian** received a Hellman Faculty Fellowship.
- **Erik Menke** and **Hrant Hratchian** received CETL teaching fellowships.
- **Christine Isborn, Hrant Hratchian,** and **Ben Stokes** placed postdocs in tenure-track faculty positions.

Welcome to our New Faculty!

Chris Amemiya
Professor
Molecular Cell Biology



Molecular Cell Biology: Recent Accomplishments

- **Clarissa Nobile, Katrina Hoyer, Aaron Hernday** – award UC Multicampus Research Programs and Initiatives (MRPI) grant to study Valley Fever
- **Clarissa Nobile** – NIGMS R35 Grant, NIH Grant
- **Rudy Ortiz** - USDA/NIFA Hispanic-Serving Institutions (HSI) Education Grant

Life and Environmental Sciences: Recent Accomplishments

- **Asmeret A. Berhe** – NSF ADVANCE Grant
- **Jessica Blois** – NSF Grant (paleobiology)
- **Mike Dawson** – NSF Grants (2)
- **Steve Hart** – co-author on Nature Communications paper (dust)
- **Jay Sexton** – US Fish and Wildlife Service Grant (vernal pools)
- **Post-doc Awards:**
 - **Fernanda Santos** – UCM Chancellor's Postdoc (mentor: A. Berhe)
 - **Marie-Claire Chelini** – UC President's Postdoc (mentors: D. Edwards & C. Frank)

Physics: Recent Accomplishments

- **Bin Liu** – Awarded his first NSF Grant
- **Lin Tian** – NSF Grant
- **Linda Hirst** – Senate Award for Distinction in Research
- **Roland Winston** – UCOP Grant for UC Solar Institute
- UCM will host APS Far West Section Conference Nov 3-4

Update on Work Groups

Academic Reorganization

- Gregg Camfield, (co-chair), Vice Provost for the Faculty
- Paul Maglio, (co-chair), Professor, School of Engineering
- Marjorie Zatz, Vice Provost and Dean, Graduate Division
- **Betsy Dumont, Dean, School of Natural Sciences**
- Jason Beaster-Jones, Associate Professor, AP Chair, SSHA
- **Hrant Hratchian, Assistant Professor, Member of Graduate Council**
- Rebecca Smith, staff, SSHA

Academic Planning

- Tom Peterson, (Co-chair), Provost and Executive Vice Chancellor
- Susan Amussen, (co-chair), Chair Academic Senate
- Elizabeth Whitt, Vice Provost and Dean, Undergraduate Education
- Haipeng Li, University Librarian
- Holley Moyes, Acting Dean, SSHA
- **Mike Colvin, Professor, CAPRA Rep**
- **Teamrat Ghezzehei, Associate Professor, Chair of Grad Council**
- Martha Conklin, Professor, Chair of SoE Executive Committee
- Sarah Depaoli, Associate Professor, Undergrad Chair for Psychology
- Alisha Kimble, Assistant Dean, Undergraduate Education

Budget Planning

- Veronica Mendez, (co-chair), Interim Vice Chancellor, Planning and Budget
- Kurt Schnier (co-chair), Professor, Vice Chair, Academic Senate
- Mark Matsumoto, Dean, School of Engineering
- **Sam Traina, Vice Chancellor, Office of Research and Econ Dev**
- Maria Tinoco, staff, Grad Div
- Leroy Westerling, Associate Professor, Vice Chair Grad Council
- Anne Zanzucchi, LSOE/Chair of Undergraduate Council
- **Michael Scheibner, Associate Professor and Member of Committee on Research**
- Mukesh Singhal, Professor, Chair of CAPRA

Update on UC Path



For the UC System...

- Single Solution to streamline payroll, benefits, human resources, academic personnel, and timekeeping into a central system
- Replacement of Legacy Payroll Systems (PPS)

For UC Merced...

- The starting point of our commitment to modernizing business systems and processes
- Partnership opportunity for BFSI, APO, and Schools to design simple, clear, and intuitive personnel processes

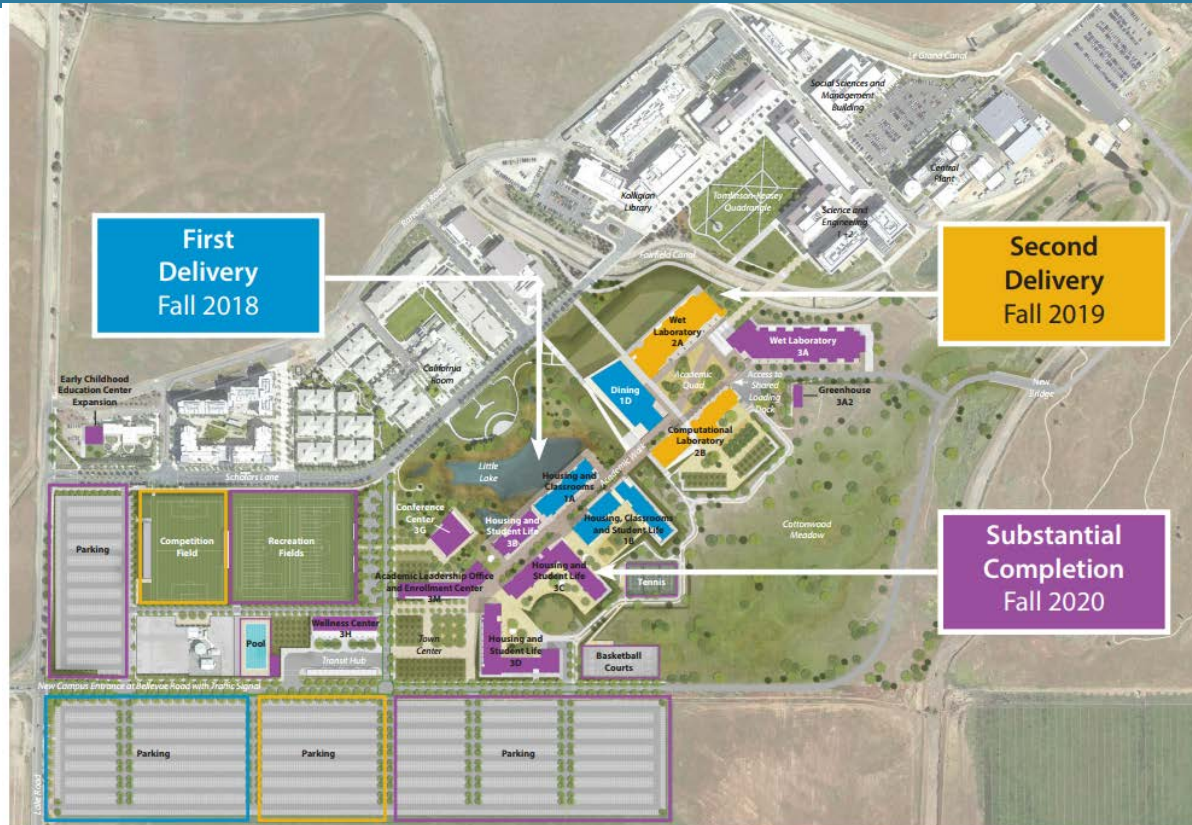
For the School of Natural Sciences...

- Payroll requests will take longer during transition
- There will be limited ability to fulfill retroactive payroll requests
- Once UCPATH is fully built-out, it may support easier effort and budget reporting

Want more information on UCPATH?
UCPATH.ucmerced.edu | ucpath@ucmerced.edu

Want to engage in modernizing systems?
BFSI | jmartin22@ucmerced.edu

Update on 2020



Lead: Maggie Saunders
Director of Space
Planning and Analysis

Challenges in Public Higher Education

- Decreasing state and federal resources.
- Increasing cost of education.
- Connecting education and employment.
- Keeping pace with shifts in enrollment.
- Fostering diversity.
- Demonstrating the “value” of public higher education.

Broad Goals for Natural Sciences at UC Merced

1. Continue to Build and Sustain Excellence in Research
2. Deliver a High-quality, Affordable, and Relevant Science & Math Education
3. Advance Diversity, Inclusion, and Access
4. Continued Community Engagement
5. Raise Public Profile and Develop Relationships

Tools: Commitment, Collaboration, Transparency, Data-informed planning and assessment, Relationships with community, Leverage Communications and Development

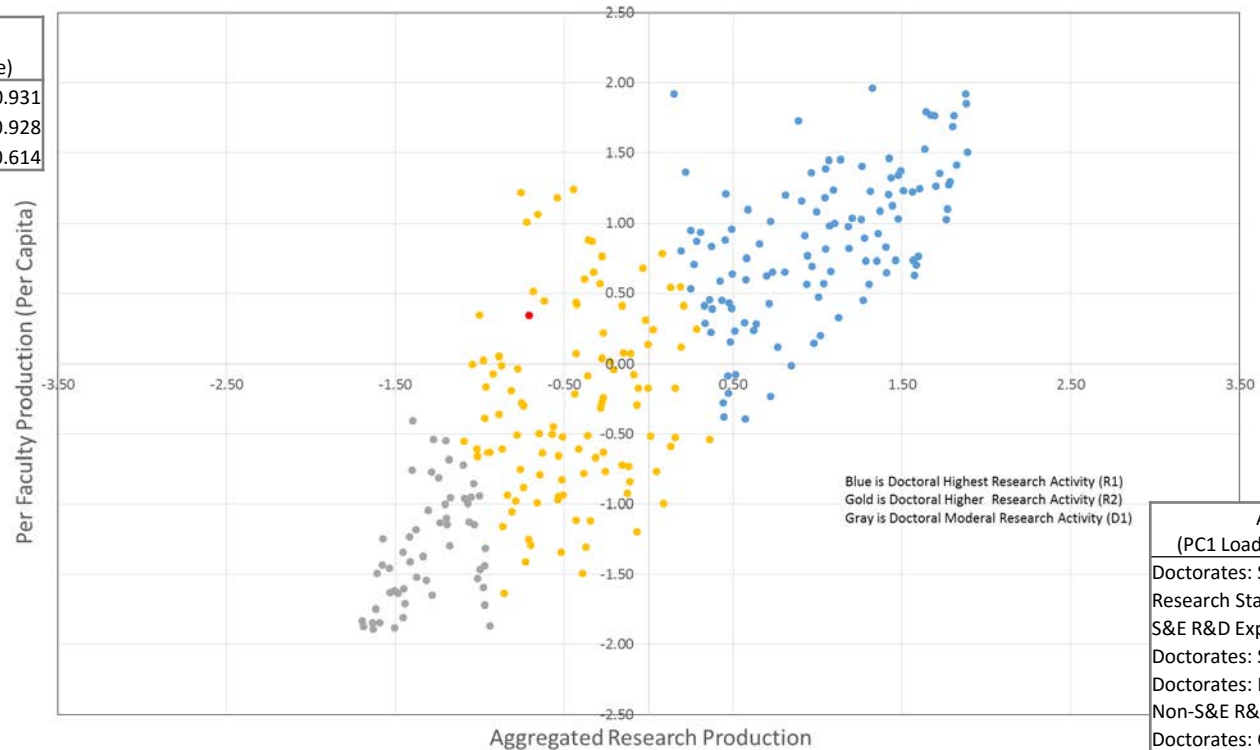
1. Building and Maintaining Excellence in Research

- Quality of publications
- Influence in field
- Awards & Recognition
- Reputation
- Funding



1. Building and Maintaining Excellence in Research

UC Merced Carnegie Placement



Blue is Doctoral Highest Research Activity (R1)
 Gold is Doctoral Higher Research Activity (R2)
 Gray is Doctoral Moderal Research Activity (D1)

Per-capita analysis (PC1 Loadings; 71% of the total variance)	
Per-capita S&E R&D Expenditures	0.931
Per-capita Research Staff	0.928
Per-capita Non-S&E R&D Expenditures	0.614

Aggregate analysis (PC1 Loadings; 70% of total variance)	
Doctorates: STEM	0.914
Research Staff	0.902
S&E R&D Expenditures	0.900
Doctorates: Social Sciences	0.873
Doctorates: Humanities	0.819
Non-S&E R&D Expenditures	0.791
Doctorates: Other Fields	0.616

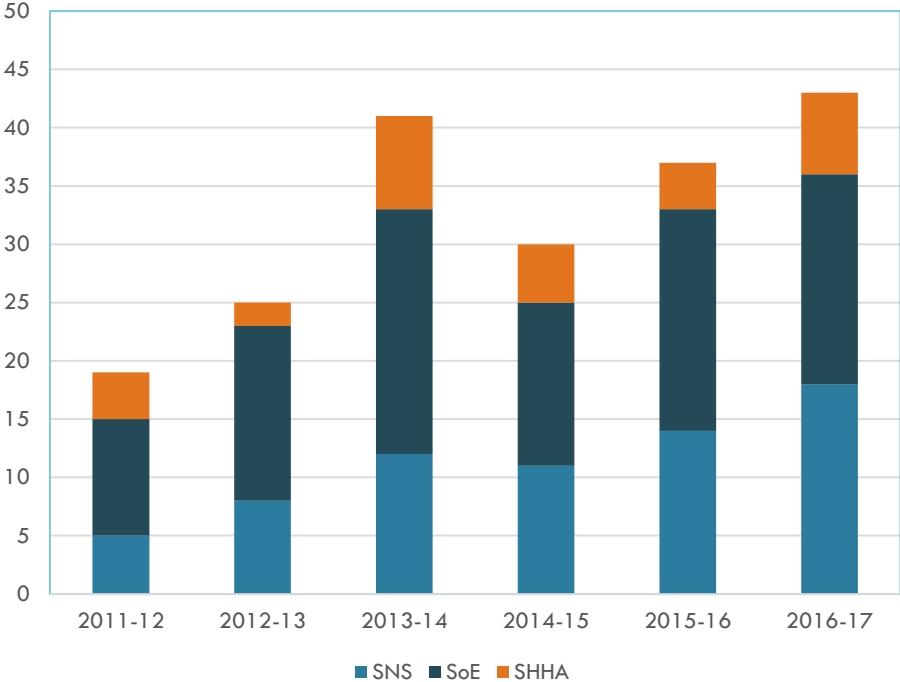
1. Building and Maintaining Excellence in Research

Models for the Path to R1

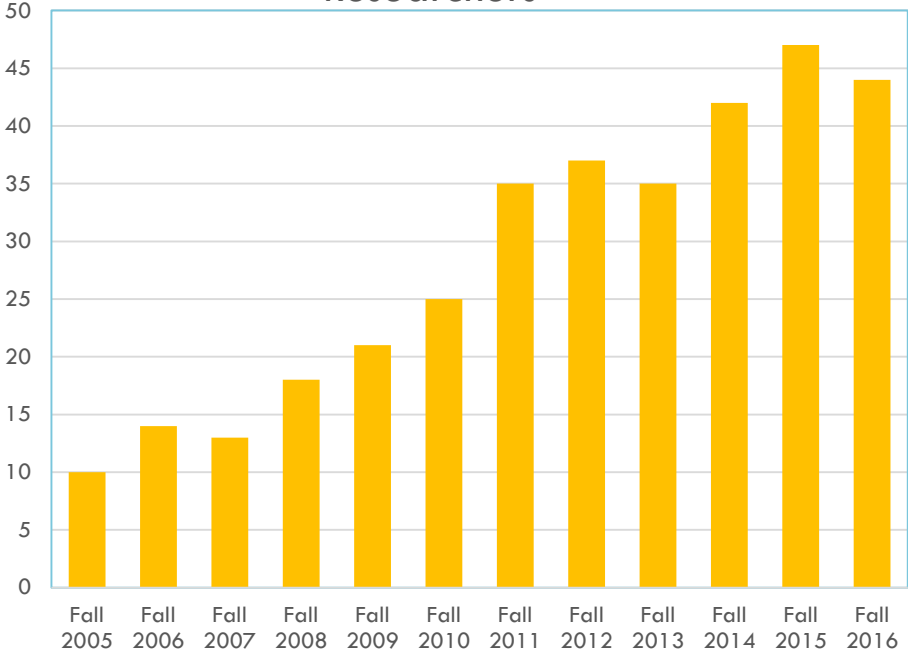
	Enrollment	STEM PhDs	Research Staff	STEM Research Expenditures (\$1,000s)	Social Science PhDs	Humanities PhDs	Non-STEM Research Expenditures (\$1,000s)	FT Ladder-Rank Faculty	R&D Expenditures/ Ladder-Rank Faculty (\$1,000s)	
Spring '17	7,967	33	33	\$22,612 (SNS 9.1M; 5.3 G&C)	2	6	\$1,304	166	\$144	R2
Models	stable	33	66	\$67,836	2	6	\$3,912	166	\$432	R1
	stable	33	132	\$90,448	2	6	\$5,216	166	\$576	R1
	15,000	79	178	\$121,949	5	14	\$7,033	397	\$325	R1
	15,000	79	211	\$144,561	5	14	\$8,337	397	\$385	R1
	20,000	105	204	\$139,987	6	19	\$8,073	530	\$279	R1
	20,000	105	237	\$162,599	6	19	\$9,377	530	\$324	R1
	25,000	132	231	\$158,024	8	24	\$9,113	662	\$252	R1
	25,000	132	264	\$180,636	8	24	\$10,417	662	\$289	R1

1. Building and Maintaining Excellence in Research

Doctoral Degrees Conferred



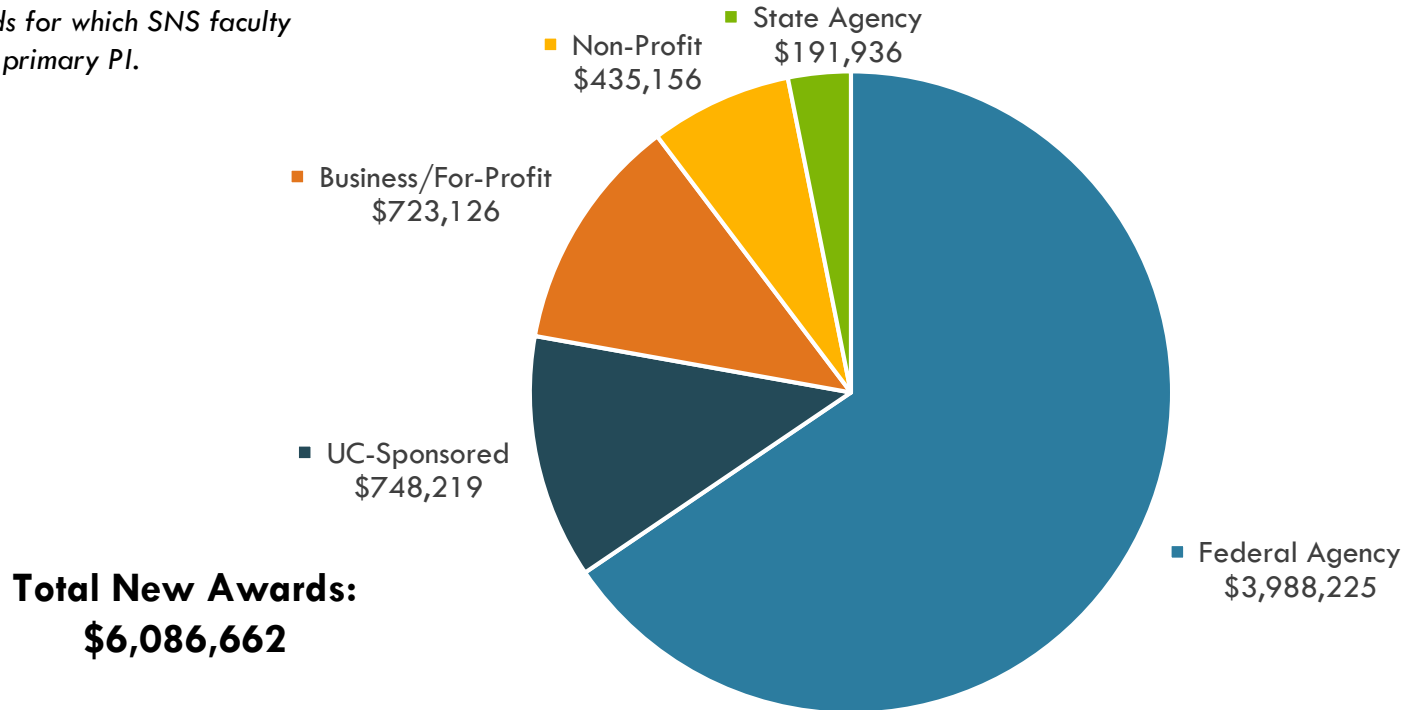
Postdoc Scholars and Professional Researchers



1. Building and Maintaining Excellence in Research

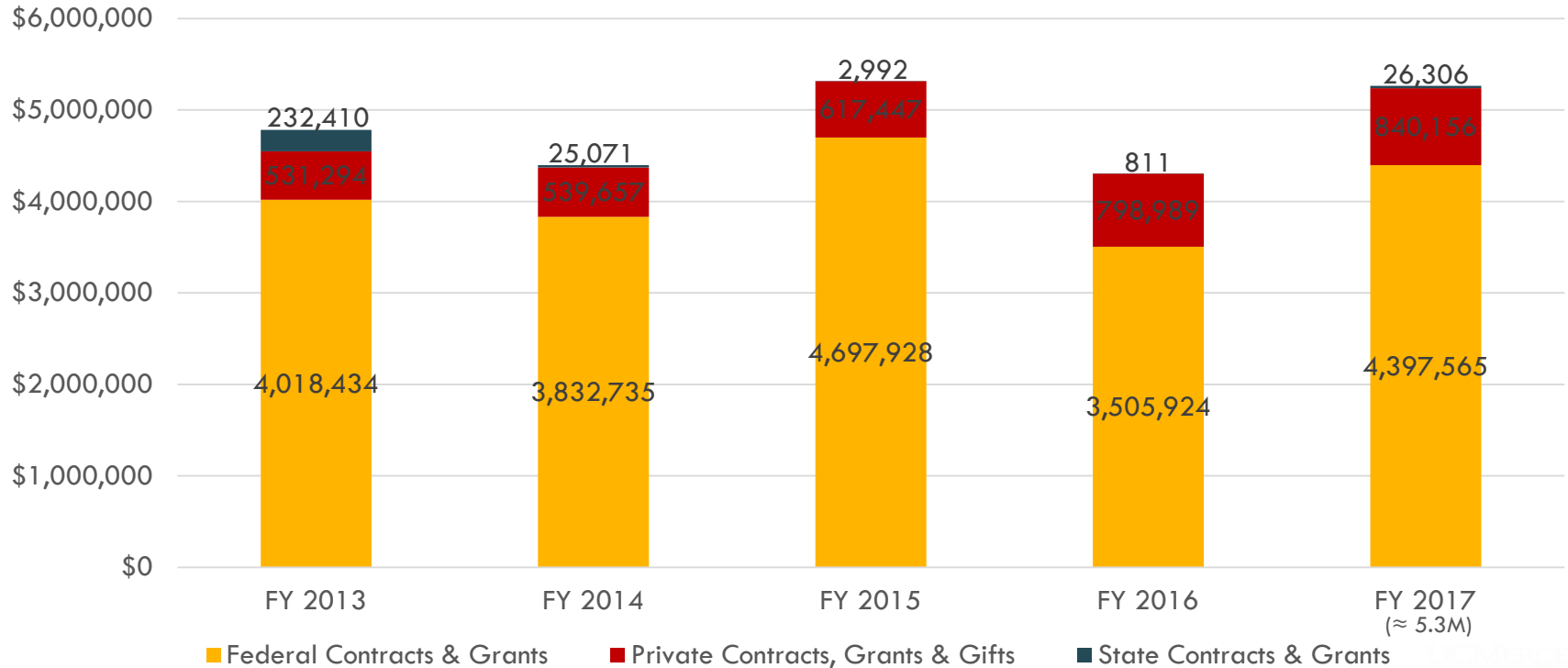
2016-17 SNS New Awards by Sponsor Type *

* New awards for which SNS faculty member was primary PI.



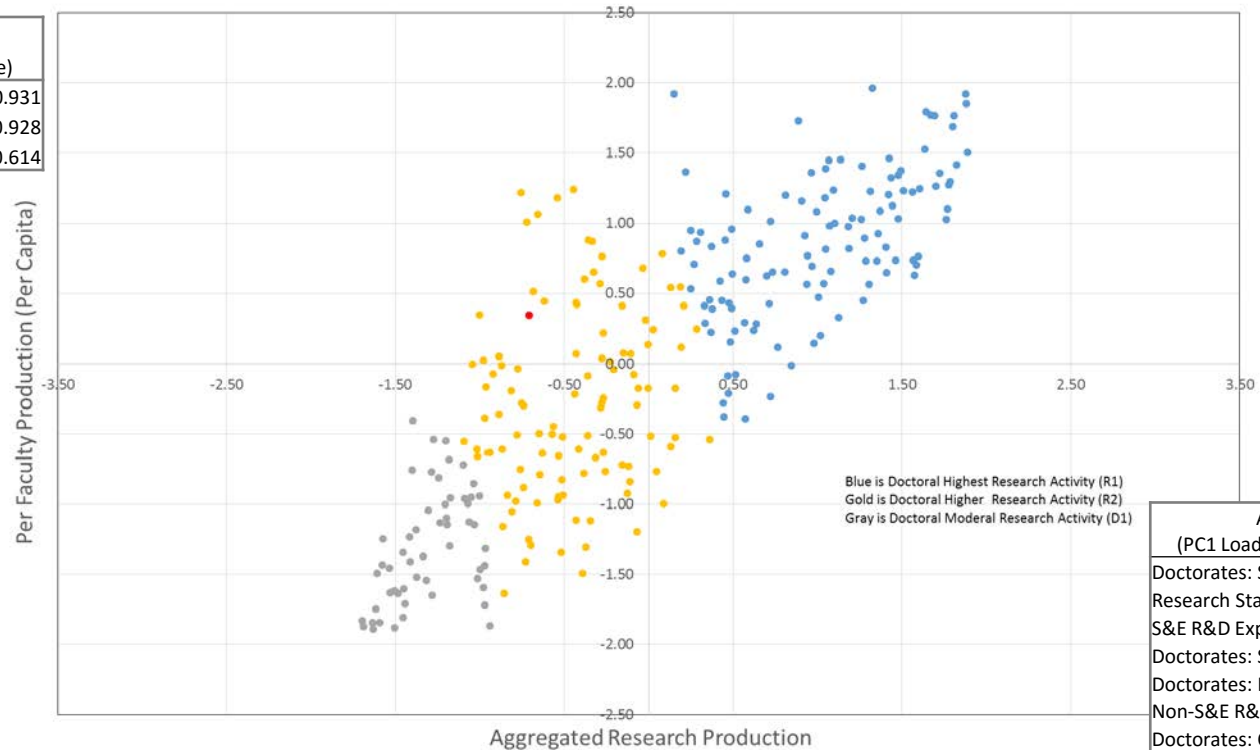
1. Building and Maintaining Excellence in Research

SNS Contract & Grant Expenditures



1. Building and Maintaining Excellence in Research

UC Merced Carnegie Placement



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1. Building and Maintaining Excellence in Research



Basic
Research

Translational
Research

1. Building and Maintaining Excellence in Research

Faculty

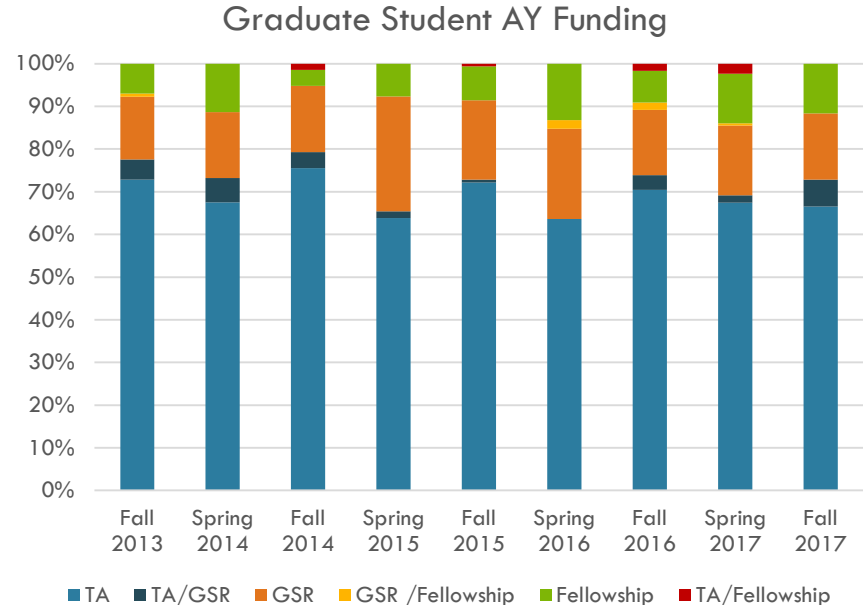
- Balance academic breadth and depth.
- Anticipate new areas of research and explore them through Center and Institute grants.
- Nurture collaborations on and off-campus.
- Support – pre and post-award support, regular feedback & mentoring for early and mid-career faculty, mentorship in grant writing & management, writing groups, management & leadership training
- Embrace the benefits of diversity



1. Building and Maintaining Excellence in Research

Graduate Education

- Top-notch research can't happen without top-notch graduate students and postdocs.
- Competition for the top graduate students is stiff. They need to be courted and supported.
- The most valuable graduate training is well-aligned with job markets.

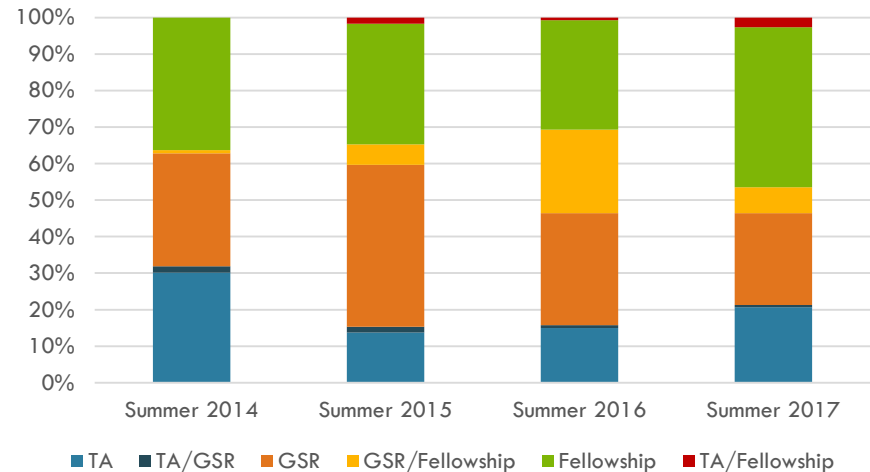


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Graduate Student Summer Funding



1. Building and Maintaining Excellence in Research



Staff

- The backbone of the university
- Goals: streamline business practices, clarify roles and responsibilities, more cross-training
- Professional development
- Opportunities for advancement

2. Delivering a High-quality, Relevant Science & Math Education.



Critical thinking, problem solving, and communication.



Practical skill sets.

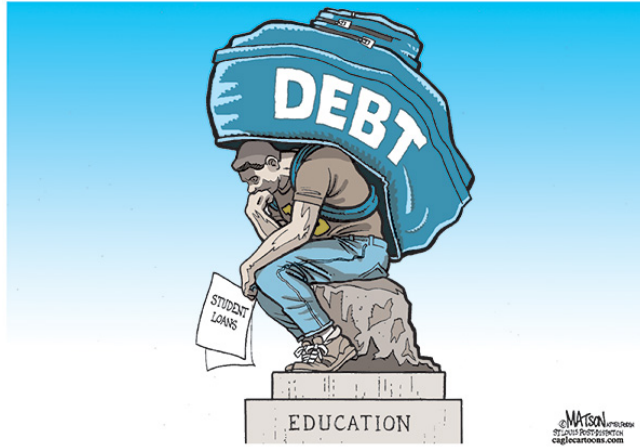


Contribute to a well-informed public.



2. Delivering a High-quality, Relevant Science & Math Education.

What students want:



Excellent education with minimal debt.

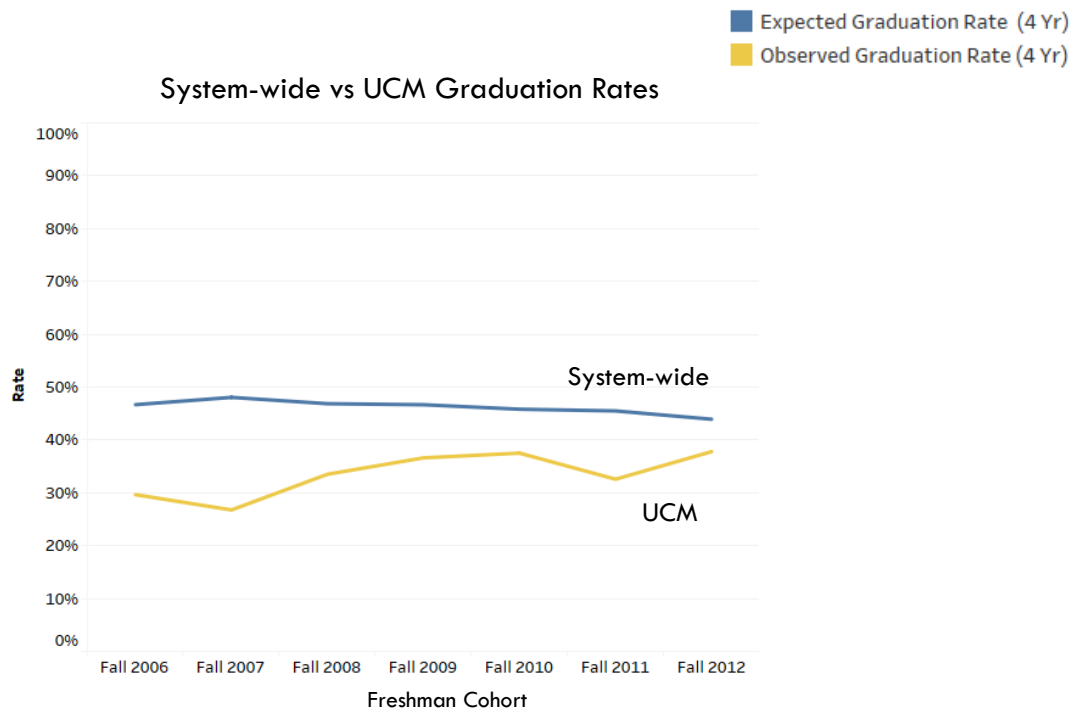
A good job.



Acceptance into a graduate or professional school.

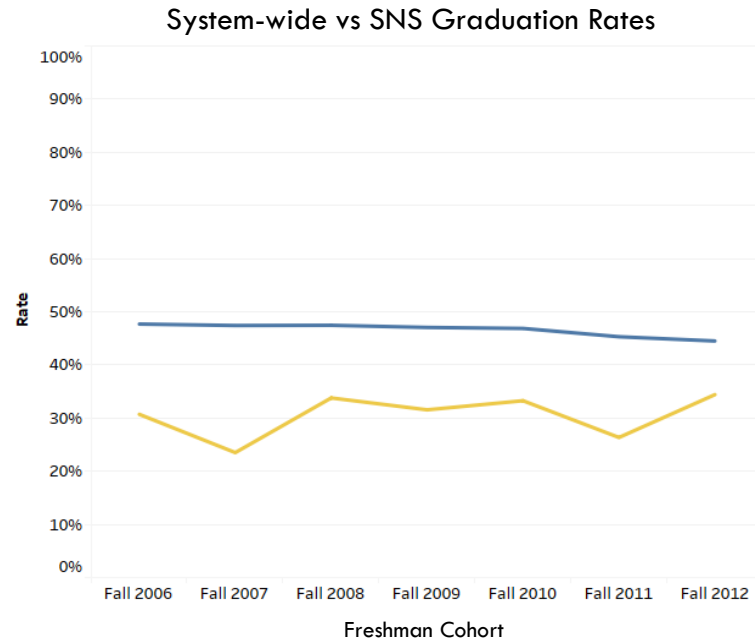
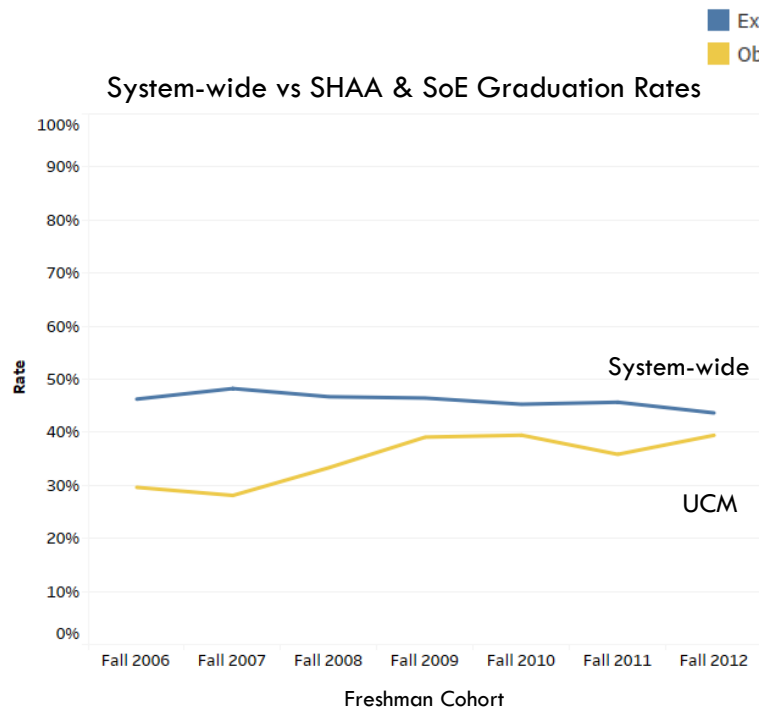


2. Delivering a High-quality, Relevant Science & Math Education.



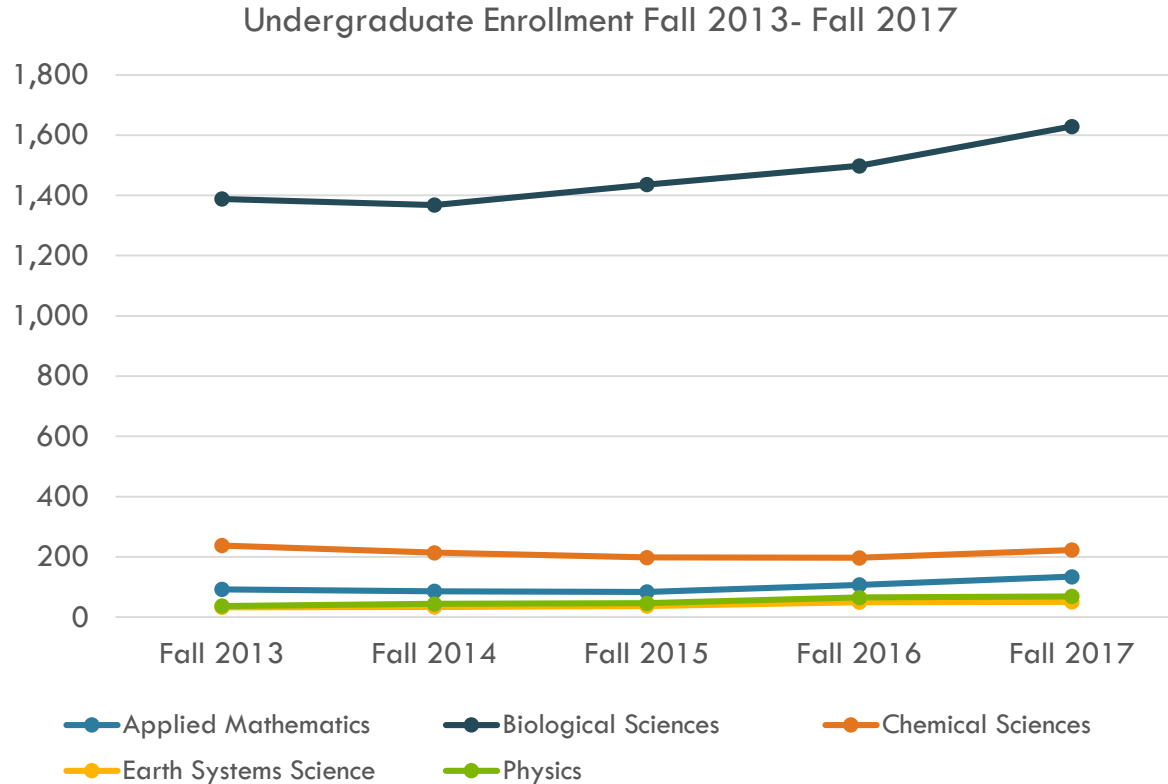
Expected graduation rates are calculated the subset of all UC students matched with UCM students for residence, gender, 1st generation status, race/ethnicity, Pell status, SAT scores, high school GPA, and college credit earned prior to matriculation.

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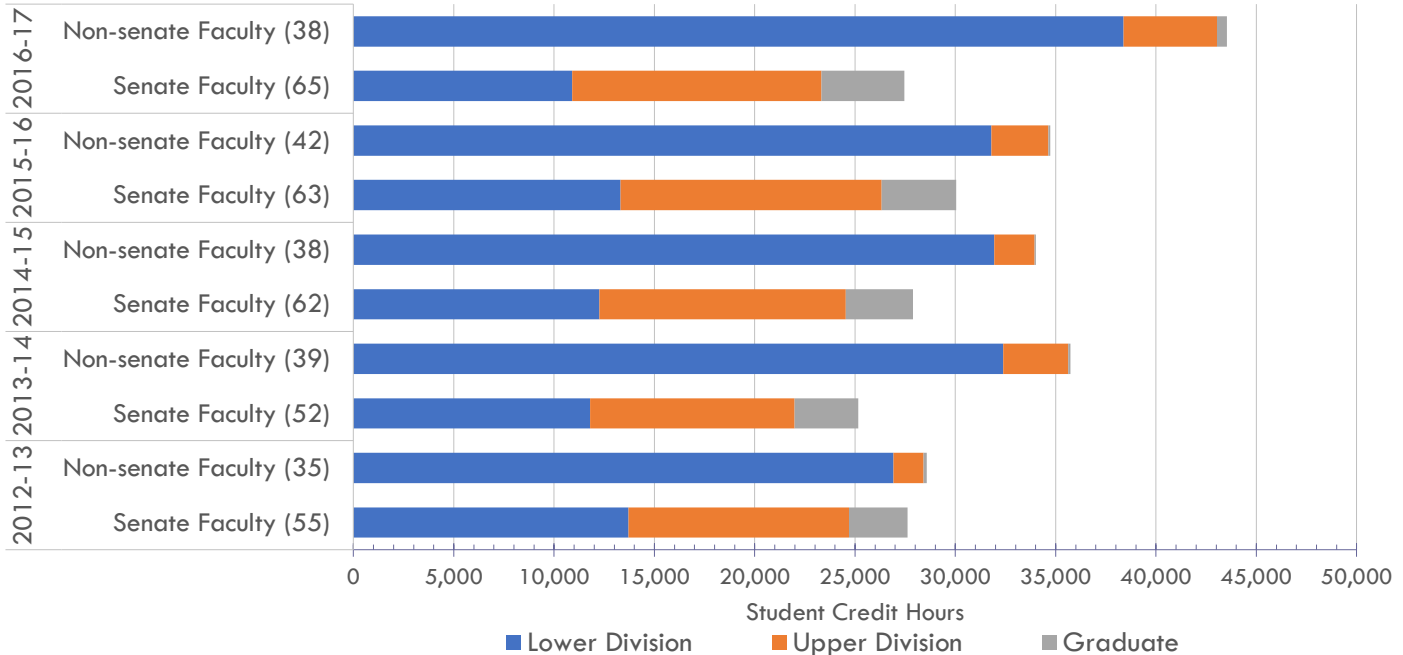
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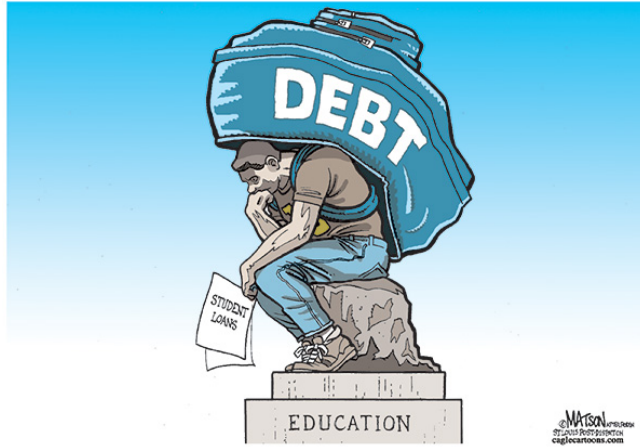
2. Delivering a High-quality, Relevant Science & Math Education.

Student Credit Hours by Course Level and Senate Affiliation
 School of Natural Sciences
 2012-13 to 2016-17



2. Delivering a High-quality, Relevant Science & Math Education.

What students want:



Excellent education with minimal debt.

A good job.



Acceptance into a graduate or professional school.



2. Delivering a High-quality, Relevant Science & Math Education.

Connecting undergraduate education to careers.

Job Projections (not degree programs)	New Jobs 2014-2024 in 1,000s	Growth Rate 2014-2024	Projected Salary
Elementary, middle & secondary teachers	838.2	5.8	56,870
Sales representatives (technical equipment)	95.4	6.9	78,980
Medical and clinical laboratory technologists	62.5	14	61,070
Environmental scientists, including health	39.3	10.7	68,910
Biological technicians	26.3	5.2	42,520
Chemists	22.4	2.6	73,740
Health educators	19.5	12.2	53,070
Occupational health and safety specialists	16.9	4	70,920
Geoscientists (except hydrologists & geographers)	15	10.5	89,780
Actuaries	11.7	18.1	100,610
Conservation scientists	10.6	6.9	61,810

2. Delivering a High-quality, Relevant Science & Math Education.

Connecting undergraduate education to graduate careers.

Job Projections (not degree programs)	New Jobs 2014-2024 in 1,000s	Growth Rate 2014-2024	Projected Salary
Educational, guidance, school, and vocational counselors	79.7	8.2	54,560
Occupational therapists	52.6	26.5	81,910
Physician assistants	50	30.4	101,480
Rehabilitation counselors	36	9	34,670
Health diagnosing and treating practitioners	17.7	12	74,530
Statisticians	15.4	33.8	80,500
Orthotists and prosthetists	2.7	22.6	65,630
Epidemiologists	2.2	6.3	70,820
Mathematicians	1.3	21.4	105,810
Genetic counselors	1.2	28.8	74,120

3. Advancing Diversity, Inclusion, and Access

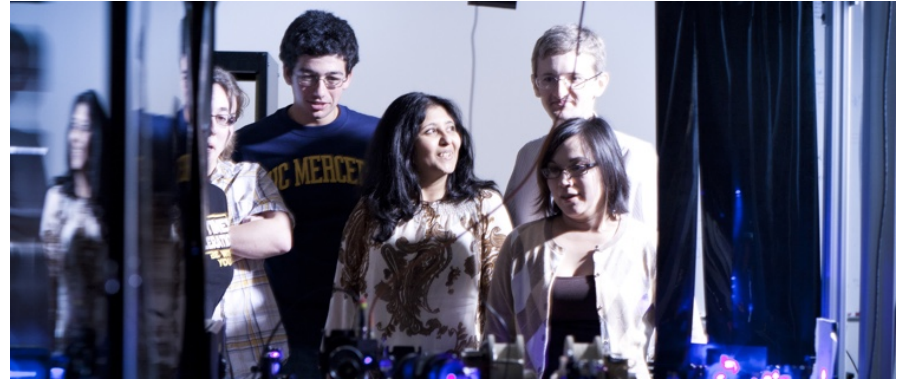


3. Advancing Diversity, Inclusion, and Access

Faculty – bring diversity to search, hiring, and merit review processes (Faculty Equity Advisors); mentoring for early and mid-career faculty; regular feedback for all faculty.

Students – support existing programming through Office of Campus Compliance, use data to identify barriers to success and collaborate across campus to mitigate them.

Staff – continue to fold diversity into search, hiring, and performance review.



4. Raise Public Profile and Develop Relationships



UNIVERSITY OF CALIFORNIA
MERCED

Merced, the University of California's newest campus, is the fastest growing public doctoral research university in the nation. Our pioneering spirit is expanding boundaries and charting a new course for higher education. An unprecedented and innovative \$1.3 billion campus expansion will add state-of-the-art labs for our growing faculty and provide modern, sustainable classrooms and facilities for our diverse and talented students.

BUILDING THE FUTURE IN THE HEART OF CALIFORNIA
UCMERCED.EDU

71% **NEW GENERAL BACHELORS DEGREE STUDENTS**

51% **NEW BACHELORS DEGREE STUDENTS**

Map of California showing UC Merced location.

Princeton Review Lists UC Merced Among Top Green Colleges



9/27/17



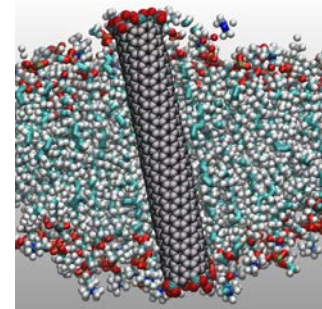
UNIVERSITY OF CALIFORNIA
MERCED

We've been ranked

#1 IN THE NATION
FOR THE FINANCIAL AID/ASSISTANCE WE PROVIDE FIRST-YEAR STUDENTS

— U.S. News & World Report, 2017 —

9/12/17



The Verge: These microscopic tubes may one day help turn seawater to drinking water.

Alex Noy & Yun-Chiao Yao (MCB, QSB)
8/24/17

The Conversation: Can the study of epigenomics lead to personalized cancer treatment?

Fabian Fillipp (CCB) 4/3/17



National Geographic: Starfish Baby Boom Surprises Biologists.

Michael Dawson & Lauren Schiebelhut (LES, QSB)
8/24/17



4. Raise Public Profile and Develop Relationships

Jason Alvarez
Science and Health Writer
University Communications



Email: jalvarez78@ucmerced.edu
Phone: (209) 228-4483
Mobile: (310) 740-6435

Molly Elazier
Dean's Assistant
School of Natural Sciences



Email: melazier@ucmerced.edu
Phone: (209) 228-2969

4. Raise Public Profile and Develop Relationships

Support Type	Amount Raised
Academic Chairs	\$1,000,000
Student Support	\$453,915
Program Support / Research	\$1,338,484
Grand Total	\$2,726,118

SNS Donations since Inception

Atul Roy Family Genome Center of Excellence

Ted and Jan Falasco Chair in Earth Sciences and Geology

Kamangar Family Chair in Biological Sciences

E.W. and Dorothy Bizzini Endowed Chair in Biological Sciences

Raymond and Julia Panfili Stem Cell Research Fund

Minnie Andow CalTeach Scholarship Endowment Fund

Ronald and Jacqueline Walker Health Science Research Fund

UC Merced Stem Cell Fund

Jefferson Jennings Doolittle Endowed Scholarship Fund

UC Merced Donors Scholarship

Jane Evans Vilas Biomedical Instrumentation Fund

UC Merced Stem Cell Fund

CalTeach Professional Development Summer Institute for Valley Teachers

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Tools: Commitment, Collaboration, Transparency, Data-informed planning and assessment, Relationships with community, Leverage Communications and Development

