

# COLLEGE OF ENGINEERING

ANNUAL FACULTY MEETING  
MAY 19, 2011

# MEETING MINUTES

- UNIVERSITY OF CALIFORNIA, DAVIS  
VOLUME XXXVIII, NO. 3
- ACADEMIC SENATE
- MINUTES
- REGULAR MEETING
- FACULTY OF THE COLLEGE OF ENGINEERING  
(DAVIS)
- May 19, 2011, 4:00 p.m., room 1065 Kemper Hall

# Order of Business

- 1. Announcements by the President, Mark Yudof (none)
  
- 2. Announcements by the Chair, Matthew Farrens

-

# Executive Committee Activities

- Discussion regarding the closure of the department of Applied Science.
- Optical Science Major – voted to close admissions.
- Computational Applied Science Major – voted to cancel major.
- Joint Federation/Senate review committee – discussion regarding on-going difficulties between COE and review committee for federation appointments.
- Voted to amend the current GE requirements as requested by UGEP.
- Jeannie Darby (CEE) elected as Vice-Chair for AY 2011/12, Marjorie Longo (CHMS), will serve as chair of CEC for AY 2011/12.

# ORDER OF BUSINESS

## 3. Announcements by Dean, Enrique J. Lavernia

Slides to follow

# College Statistics

- Established in 1962
- 8 academic departments
- Multidisciplinary research centers
- 211 faculty members
- Highest number of ABET-accredited majors in California
- 20,000 Alumni
- 3,250 Undergraduates
- 1,200 Graduate Students
- 15 Undergraduate majors
- 10 Graduate programs



# Engineering Departments & Faculty

- Eight departments (# of faculty)
  - Applied Science (17) – *Chair: Dr. Yin Yeh*
  - Biological and Agricultural Engineering (17) – *Chair: Dr. Raul Piedrahita*
  - Biomedical Engineering (21) – *Chair: Dr. Kyriacos Athanasiou*
  - Chemical Engineering and Materials Science (31) – *Chair: Dr. Bob Powell*
  - Civil and Environmental Engineering (33) – *Chair: Dr. Sashi Kunnath*
  - Computer Science (31) – *Chair: Dr. Prasant Mohapatra*
  - Electrical and Computer Engineering (29) – *Chair: Dr. Rick Kiehl*
  - Mechanical and Aerospace Engineering (32) – *Chair: Dr. Case Van Dam*

# Importance of Diversity in Engineering

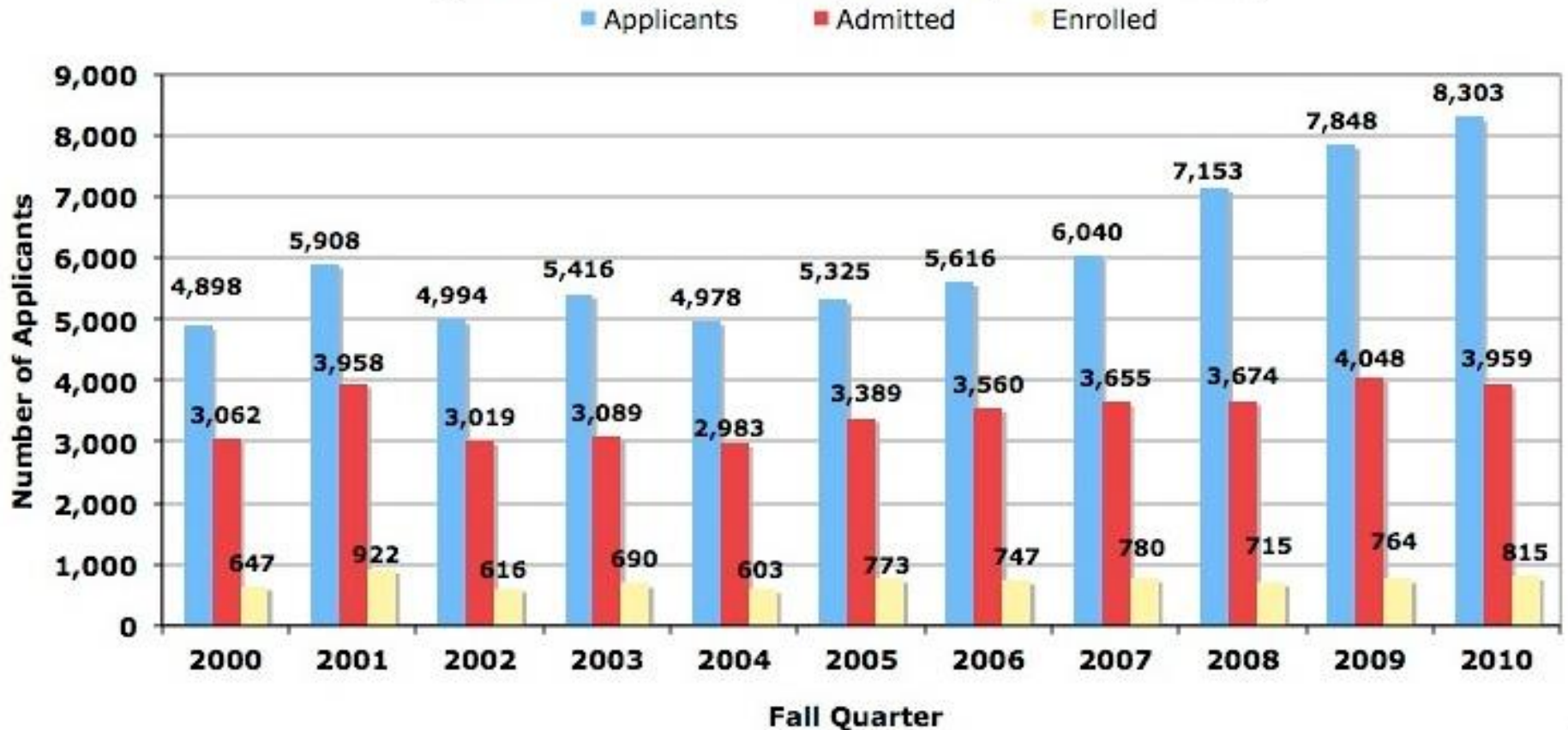
- Generates more relevant long-term solutions to important societal problems
- Engages a talented intellectual resource
- Satisfies industry needs and demands





# Freshmen Applicants, Admissions and Enrollments

**Freshmen Admissions in the College of Engineering**  
(includes the Computer Science major in the College of Letters & Science)

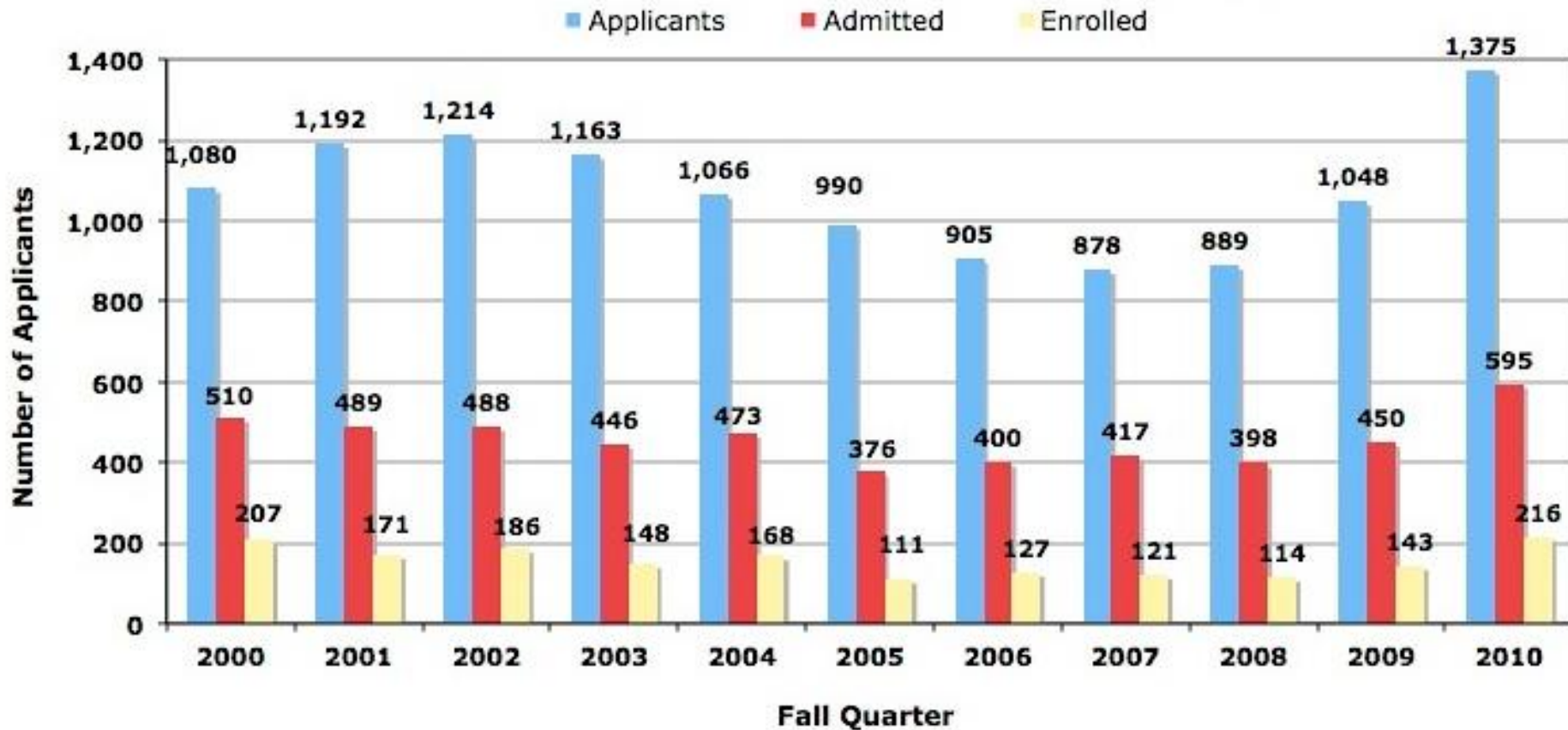


CA Residents: 2011 applications = 7832; admitted = 3736; intend to register = 783

Non-residents: 2011 applications = 910; admitted = 712; intend to register = 77

# Transfer Applicants, Admissions and Enrollments

**Transfer Admissions in the College of Engineering**  
(includes the Computer Science major in the College of Letters & Science)



CA Residents: 2011 applications = 1210; admitted = 292; SIR: June 1

Non-residents: 2011 applications = 204; admitted = 50; SIR: June 1

# 2011: Freshmen Admissions

<b>Major</b>	<b>Applications</b>	<b>Admissions</b>	<b>Intend to Register</b>
EEEL (Electrical)	642	431	81
ECOM (Computer)	632	259	58
ECSE (Comp Sci & Engr)	983	481	75
EASE (Aerospace)	831	319	60
EMEC (Mechanical)	1390	562	103
EMEM (Mechanical/Materials)	140	59	7
ECIV (Civil)	1328	489	104
EBCL (Biochemical)	165	122	26
ECML (Chemical)	631	476	100
EMSE (Materials Science)	87	87	27
ECHM (Chem/Materials)	65	74	15
EEME (Electronic Materials)	15	10	3
EBSE (Biological Systems)	296	198	61
ECAS (Comp. Applied Sci.)	13	3	1
EOSE (Optical Science)	43	12	2
EBIM (Biomedical)	1553	866	136

# Undergraduate Majors

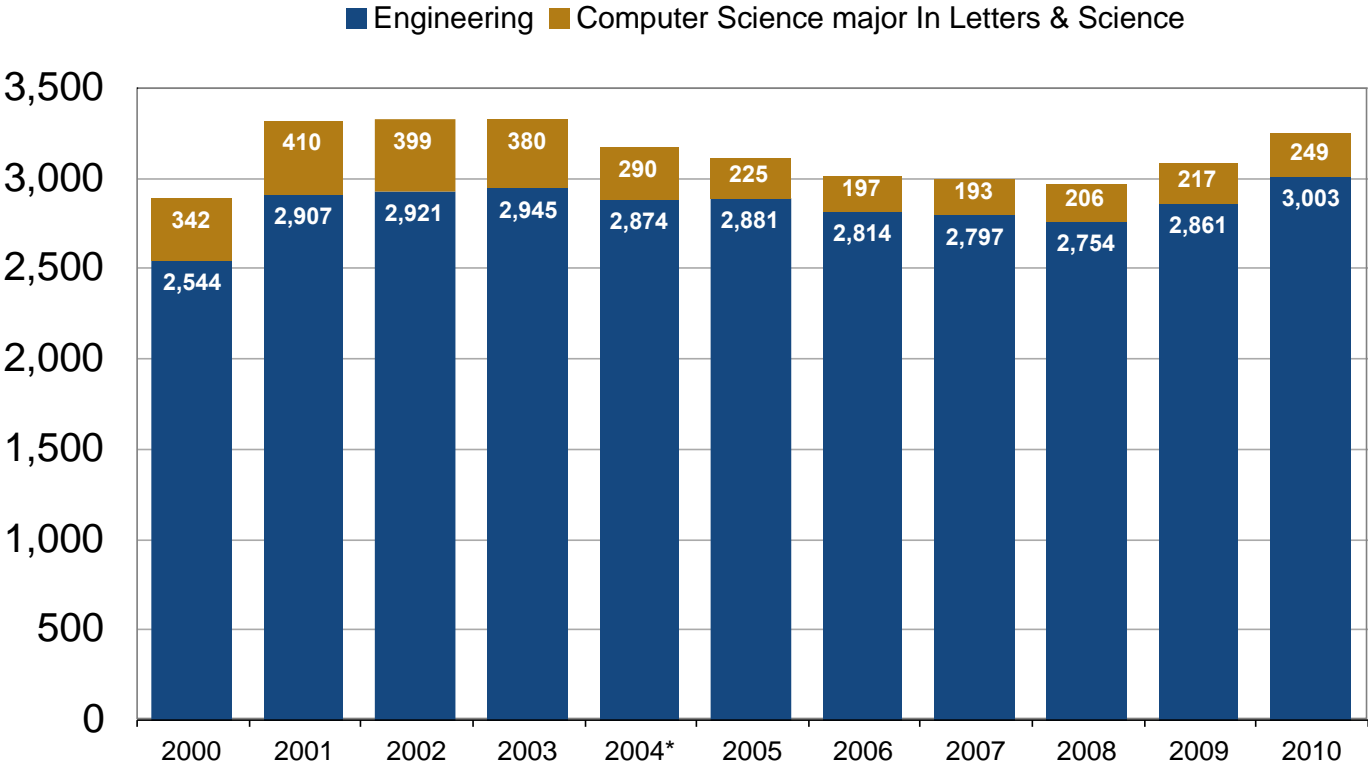
## thirteen majors...

- Aerospace Science & Engineering
- Biochemical Engineering
- Biological Systems Engineering
- Biomedical Engineering
- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Computer Science & Engineering
- Electrical Engineering
- Electronic Materials Engineering
- Materials Science & Engineering
- Mechanical Engineering
- Optical Science & Engineering

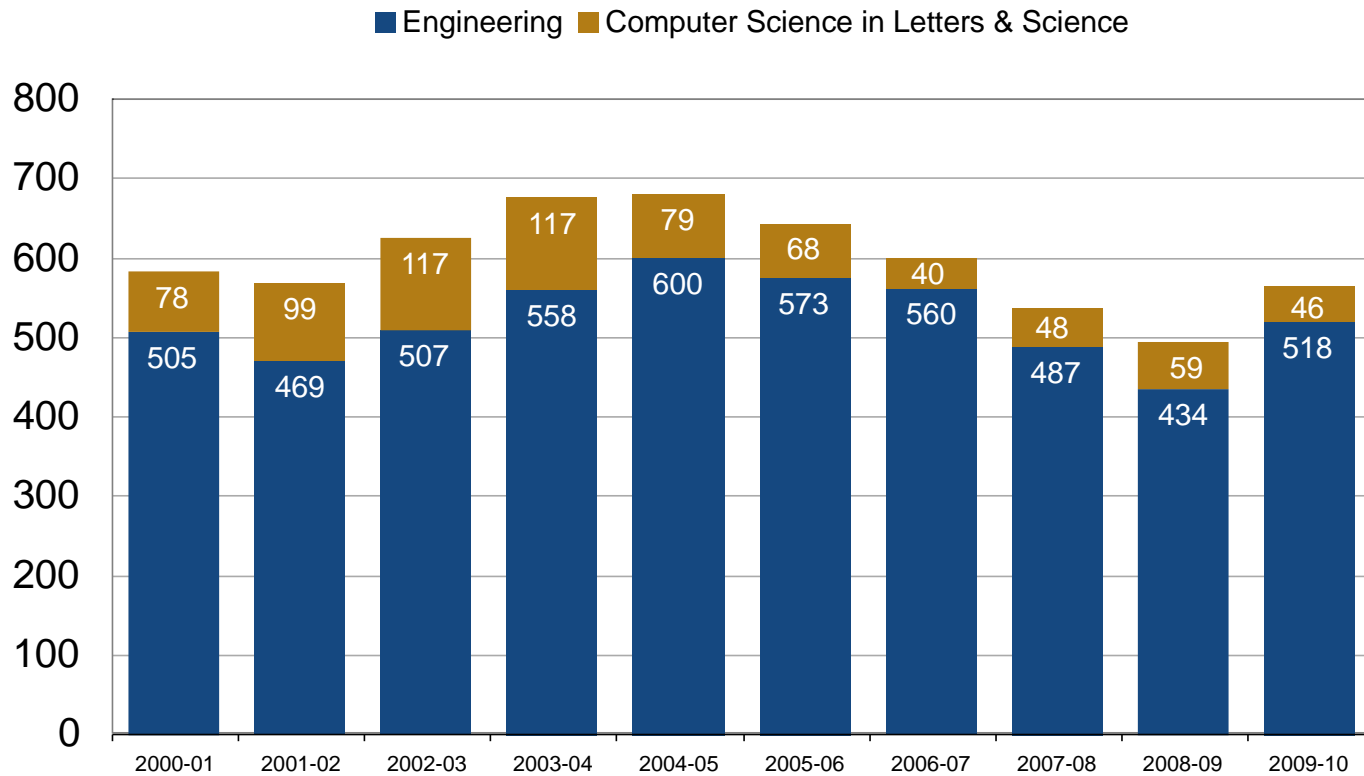
## two combined majors...

- Chemical Engineering/Materials Science & Engineering
- Mechanical Engineering/Materials Science & Engineering

# Undergraduate Enrollments



# Bachelor Degrees Awarded



# ABET Accredited Majors

- Has the largest number (twelve) of ABET-accredited undergraduate engineering programs in the UC system
  - Aerospace Science and Engineering
  - Biological Systems Engineering
  - Chemical Engineering
  - Biochemical Engineering
  - Civil Engineering
  - Computer Engineering
  - Computer Science and Engineering
  - Electrical Engineering
  - Electrical Engineering/Materials Science and Engineering
  - Materials Science
  - Mechanical Engineering
  - Optical Science and Engineering

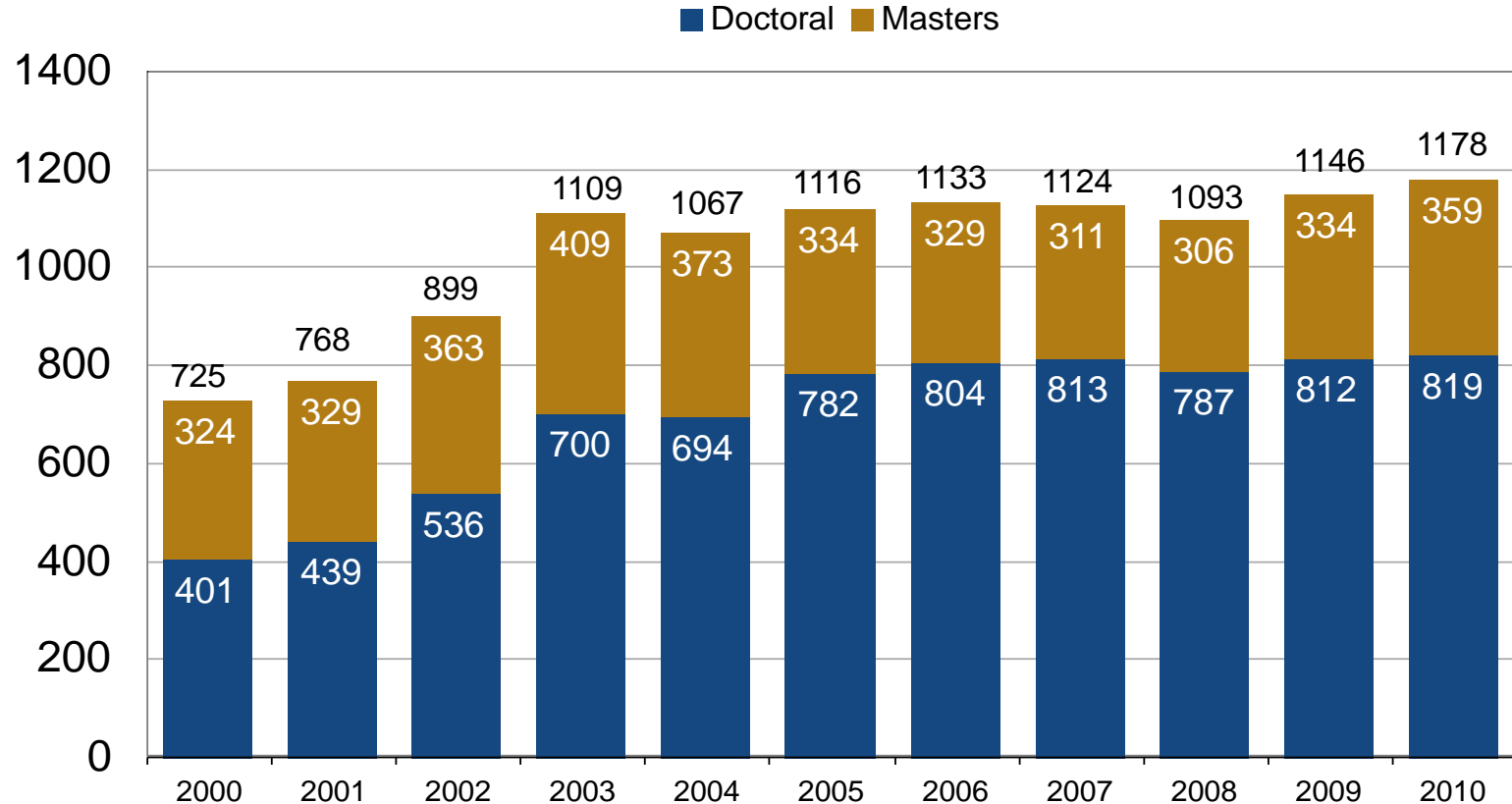
# Graduate Programs

- Six departmentally-based graduate programs and 3 graduate groups
- Fall 2010 graduate enrollment: 1178 (70% Ph.D., 30% M.S.; 64% Domestic, 36% International)
- Graduate degrees awarded in 2009-10: 173 M.S., 103 Ph.D.
- Graduate student/faculty ratio: 5.6
- Graduate student/undergraduate ratio: 0.36



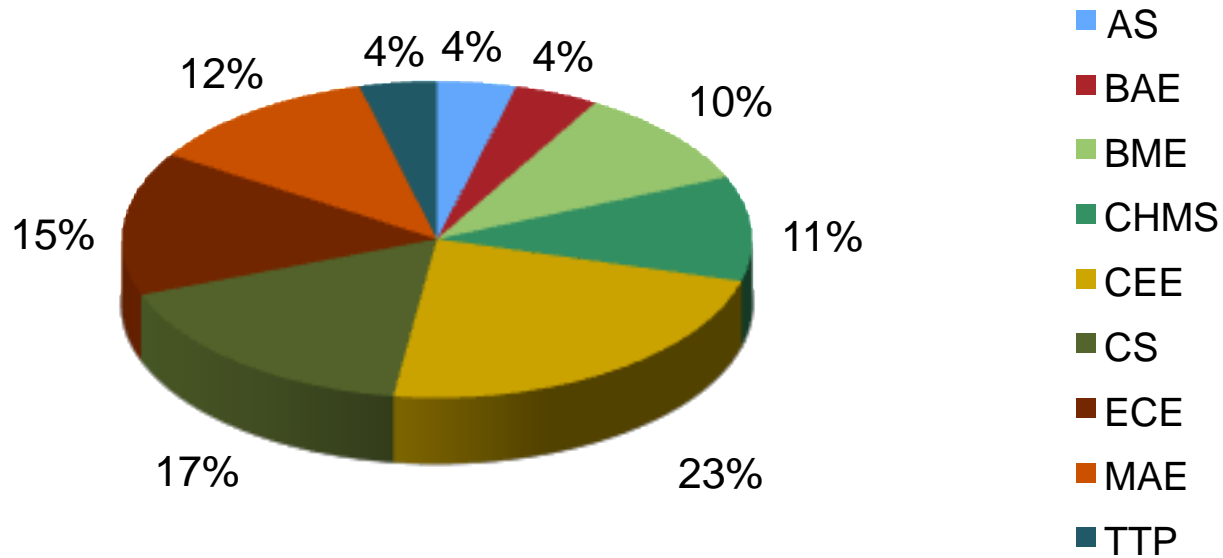
# Graduate Enrollments

Graduate Enrollment\* in the College of Engineering

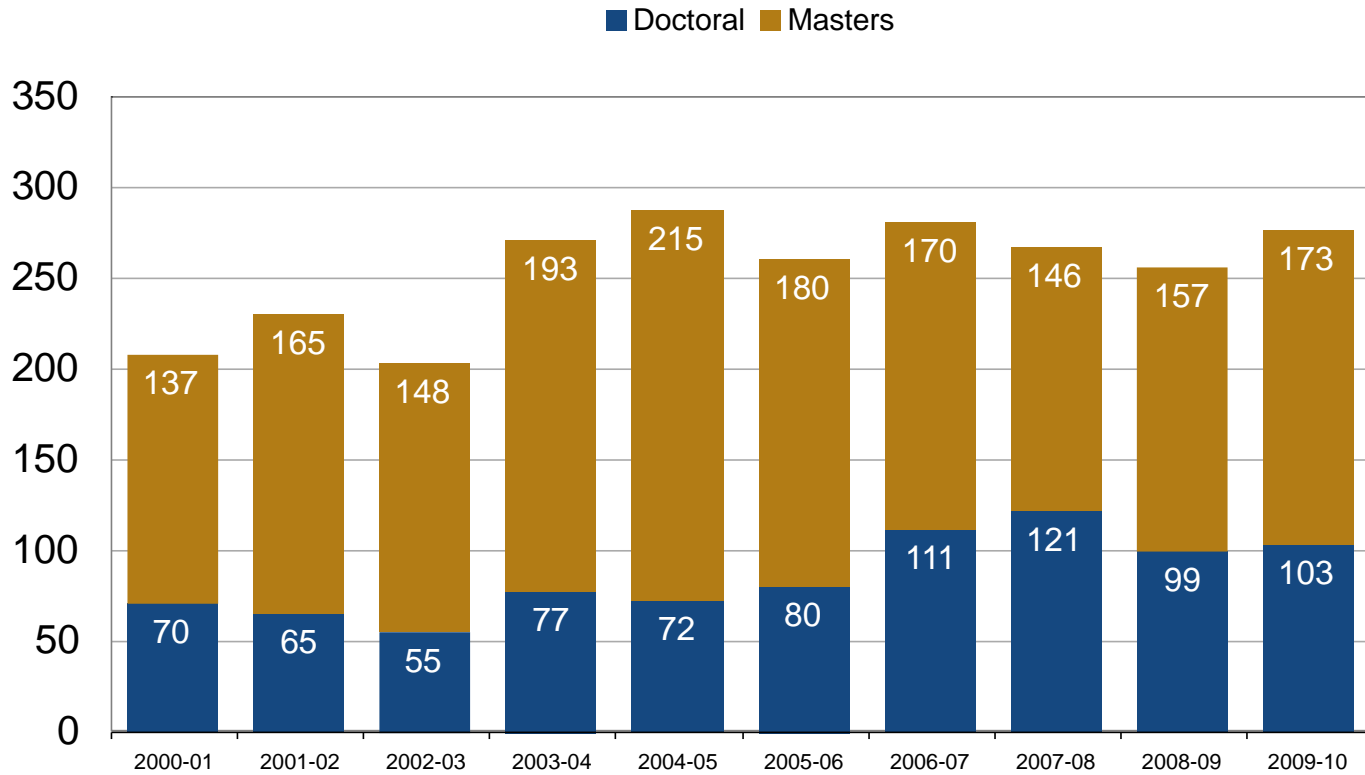


\*Starting Fall 2003, graduate enrollment includes students on PELP status, filing fee status or students in graduate groups outside of engineering whose major research advisor is an engineering faculty member.

# Graduate Enrollment by Program



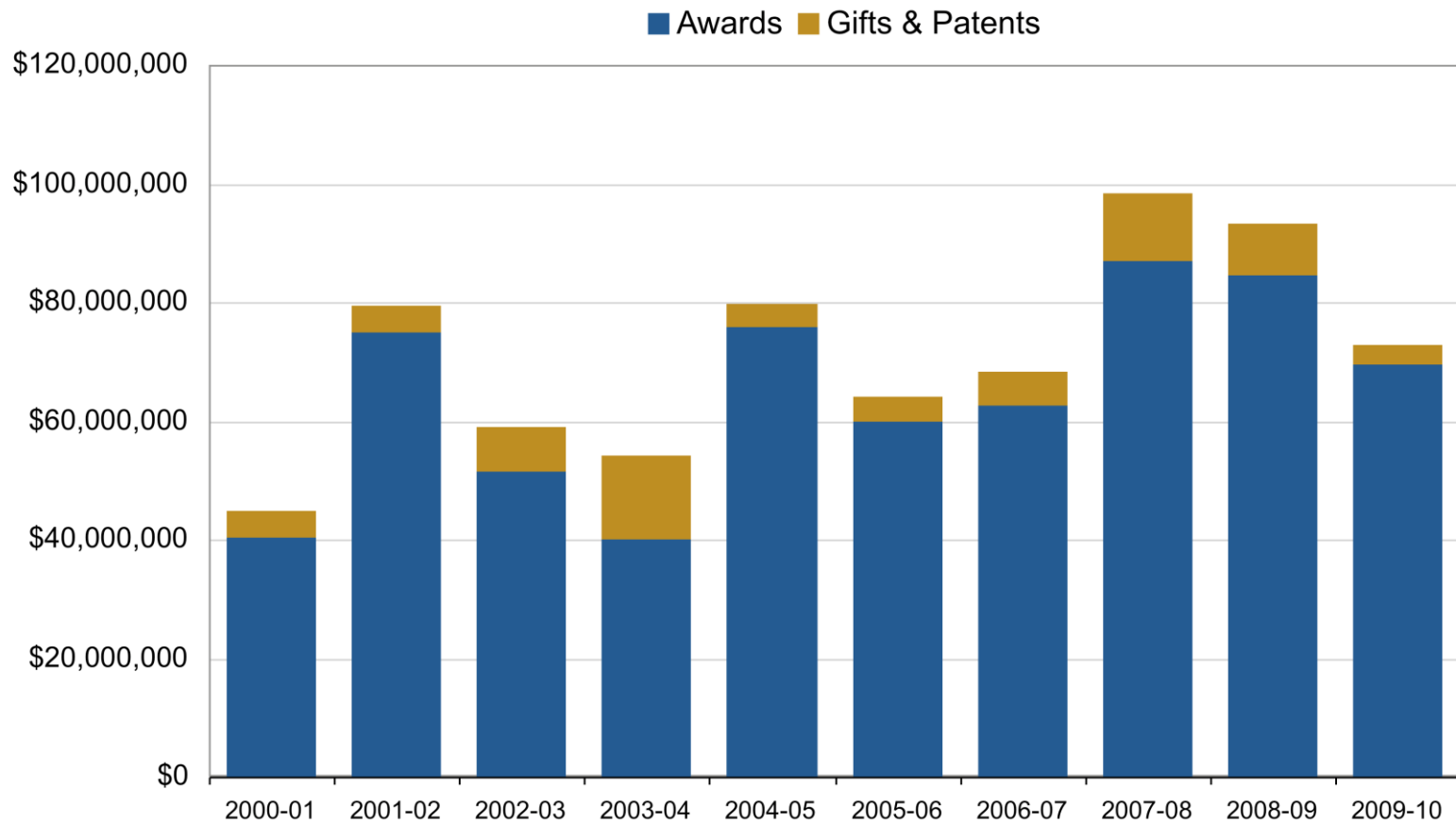
# Graduate Degrees Awarded



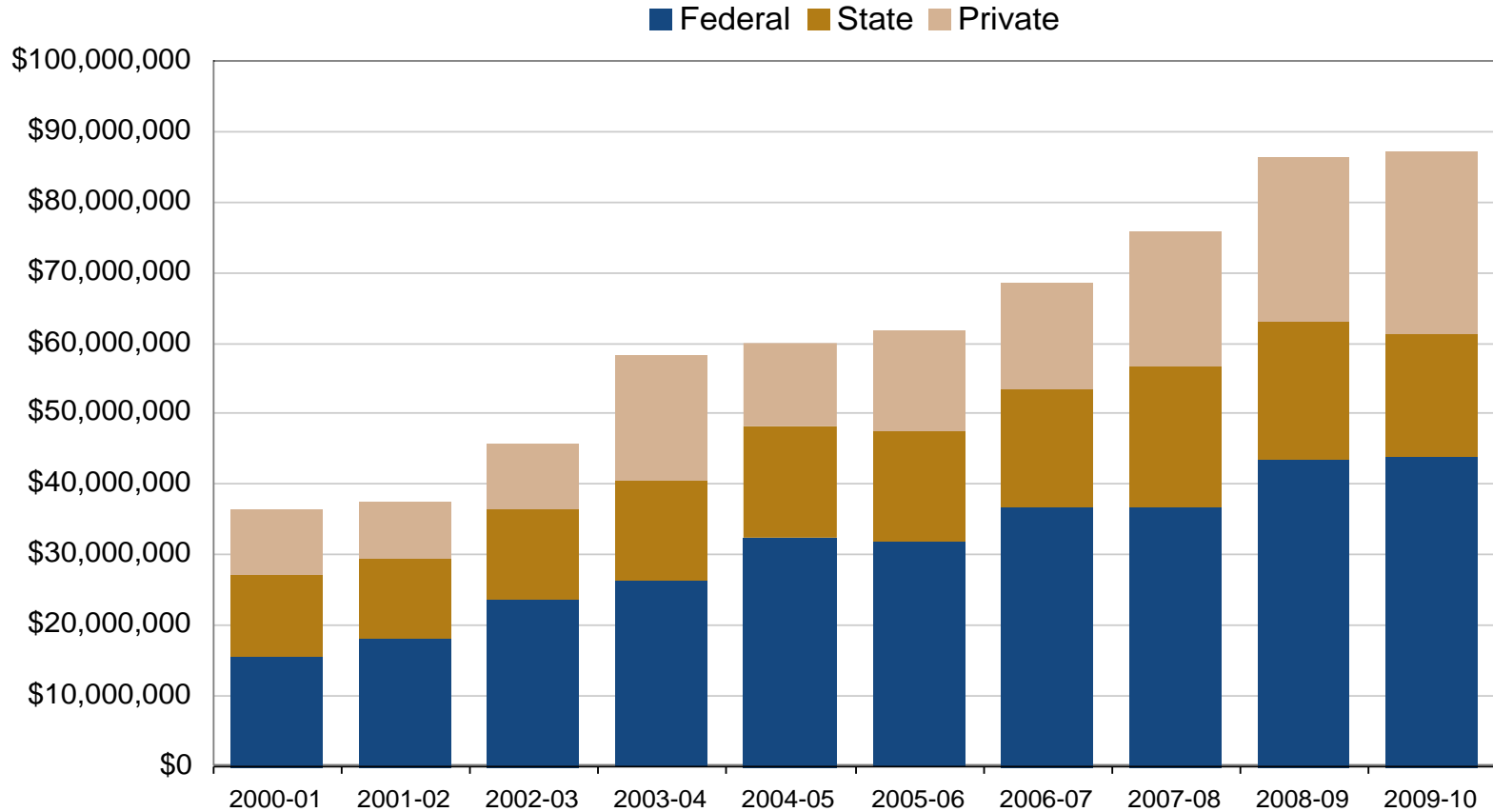
# College of Engineering Rankings

- Ranked 18th among publicly assisted undergraduate colleges of engineering nationwide by *US News & World Report 2011 edition*
- Ranked 19th among publicly assisted graduate colleges of engineering nationwide by *US News & World Report 2012 edition*

# College of Engineering Grants & Contracts



# College of Engineering Expenditures



# New Faculty since May 2010

Diran Apelian (ChMS, January, 2011)  
Member, NAE

Subhash Mahajan (ChMS, January, 2011)  
Member, NAE

# Faculty Searches in Progress

Mechanization Engineer (BAE)

Stem Cell Engineer (BME)

Physical Electronics (ECE)

Microwave, Millimeter-wave and THz Electronics  
(ECE)



# Awards to Junior Faculty

- Ilke Arslan, PECASE (ChMS)
  - Ricardo Castro, CAREER (ChMS)
  - TJ Green, CAREER (CS)
  - Tina Jeoh, CAREER (BAE)
- 
- CoE faculty have received a total of 46 CAREER and similar awards

# Recent Budget Cuts

- 2009-10 = \$1,670K
  - Assigned to non-ladder salaries.
  - \$523K (31%) absorbed by EDO.
  - Remaining \$1,147K incorporated into new BB model.
- 2010-11 = \$2,450K
  - To be realized through faculty FTE returns
  - 3-year transition
  - COE has returned 4.3 FTE worth \$690K
  - Will require approx 11 more FTE! Big challenge...

# Campus Budget Planning, 2011-12

- Academic units assigned \$11.2M out of \$67.2M total cuts
  - Of that \$11.2M, COE share is \$521K = 4.6%
  - COE is ~11% of all academic units (as GF and faculty FTE)
- Cuts based on directed, implementable(?) strategies
  - Revenues
  - Efficiencies
  - Reductions
- Whether we implement particular strategies, \$521K target must be realized

# Budget Directives for COE, 2011-12

- Revenue generating programs = \$100K
- Redirect voluntary committed cost sharing on research grants to faculty salaries = \$232K
- Redirect payroll assessment for staff training = \$30K
- Streamline organizations by increasing ratio of staff supervised to managers = \$75K
- Reduce expenses = \$84K
  - GF travel & entertainment: 20%

# REPORTS FROM STANDING COMMITTEES

Committee on Undergraduate Educational Policy,  
Angie Louie, Chair

Awards Committee, Bernard Levy, Chair

# REPORTS CONTINUED....

Research and Library Committee,  
Sabyasachi Sen, Chair

Committee on Graduate Study,  
Frank Loge, Chair

Committee on Student Recruitment, Development,  
and Welfare, Jinyi Qi, Chair

# Order of Business continued...

4. Special orders (none)
5. Petitions of students (none)
6. Unfinished business (none)

## New business: *Proposed Bylaw Changes*

33 members of the COE faculty attended the meeting, reaching the number needed for a quorum. Both bylaw changes were approved by unanimous vote.

# Proposed Bylaw Changes

- (1) Awards Committee: (E) Committee members shall consult with their home department to propose names of potential speakers for the Dean's Distinguished Lecture Series. The Awards Committee will review the list of suggested speakers at its Fall meeting prior to being forwarded to the Dean.
- (2) Committees: (15) Remove language regarding the requirement for acknowledgement letters for service on College standing committees.



# COE Standing Committees 2011/12

## ***EXECUTIVE COMMITTEE***

David Slaughter	BAE
Simon Cherry	BME
Marjorie Longo, Chair	CHMS
Jeannie Darby, Vice-Chair	CEE
Matthew Farrens	CS
Bernard Levy	ECE
Ron Hess	MAE

# COE Standing Committees 2011/12

## ***COMMITTEE ON STUDENT RECRUITMENT, DEVELOPMENT AND WELFARE***

Fadi Fathallah	BAE
Marc Facciotti	BME
Yayoi Takamura	CHMS
Kenneth Loh	CEE
Ian Davidson	CS
Anna Scaglione	ECE
Valeria La Saponara	MAE

# COE Standing Committees 2011/12

## ***COMMITTEE ON UNDERGRADUATE EDUCATIONAL POLICY***

Michael Delwiche	BAE
Angie Louie	BME
Greg Miller	CHMS
Amit Kanvinde	CEE
Phillip Rogaway	CS
TBD	ECE
Jim Schaaf	MAE

# COE Standing Committees 2011/12

## ***AWARDS COMMITTEE***

Bruce Hartsough	BAE
Kathy Ferrara	BME
Bruce Gates	CHMS
John Bolander	CEE
Zhendong Su	CS
Anh-Vu Pham	ECE
Mohamed Hafez	MAE

# COE Standing Committees 2011/12

## ***RESEARCH & LIBRARY COMMITTEE***

Wes Wallender	BAE
Alex Revzin	BME
Sabyasachi Sen	CHMS
N. Sukumar	CEE
Todd (T.J.) Green	CS
Soheil Ghiasi	ECE
Kazuo Yamazaki	MAE

# COE Standing Committees 2011/12

## ***COMMITTEE ON GRADUATE STUDY***

Shrini Upadhyaya	BAE
Kent Leach	BME
Roland Faller	CHMS
Frank Loge	CEE
Pat Mokhtarian	TTP
Kwan-Liu Ma	CS
Venkatesh Akella	ECE
Jean-Pierre Delplanque	MAE