New/Transfer Students Orientation

Dr. Kwok Siong Teh
Director
Professor, Mech Engr
School of Engineering

2018
WELCOME!
Please ask questions anytime

• Brief Introduction
  o State of the School of Engineering
  o 4 Disciplines + 3 Graduate Programs

• Information for New & Transfer Students
  o Transfer Students: Matters to take care of
  o Graduation requirements: Major vs. GE
  o Mandatory Advising
Largest university system in US

23 campuses statewide

Over 412,000 students

95,000 annual graduates

Provides 50% of all undergraduate degrees granted to California’s Latino, African-American, and Native-American students
San Francisco State University

- Founded in 1899 as teaching college. Now a comprehensive 4-year college
- Students: ~30000
- 6 Colleges:
  - College of Science and Engineering
  - College of Liberal and Creative Arts
  - College of Business
  - College of Education
  - College of Health and Social Sciences
  - College of Ethnic Studies
A brief introduction to the
SCHOOL OF ENGINEERING

Engineering.sfsu.edu
SFSU Engineering is the 2nd most popular major on campus... and still growing

- **Students**
  - >1600 undergraduate students
  - 100+ graduate students
  - 45% Transfer students
  - 28% Minority students
  - 18% Women
  - 15% International students

- **Faculty**
  - 20 TT/Tenured Faculty & growing
  - 30 part-time instructors
  - 2 technicians, 2 office staffs
SFSU Engineering adds significant values to our students – “a ticket to the middle class”

- Characteristics of incoming Engineering students:
  - First in family to attend college
  - Disadvantaged socioeconomic backgrounds
  - Working class looking to ‘upgrade’ to better-paying jobs
  - Recent immigrants
  - Mature students or post-baccalaureate students

- Characteristics of outgoing Engineering graduates:
  - Professional engineers
  - Well-paid professionals vis-à-vis other majors
  - Graduate-school bound, with national/federal scholarships
  - For many, a ticket to realize the American Dream
Our students’ academic & professional achievements comparable to R1 schools

- **Recipients of:**
  - NSF Graduate Research Fellowship
  - CSU Sally Casanova Predoctoral Scholarship
  - SWE National Scholarship
  - ASM SAMPE Materials Technology Scholarship
  - NIH MBRS RISE Scholarship

- **Admitted to:**
  - Stanford, UC Berkeley/SC/LA/SD/Davis/Irvine, Purdue, U of Washington, U of Colorado Boulder, U of Tokyo, MIT.

- **Employed by:**
  - Tesla Motors, Boeing, NASA, Lockheed Martin
  - Apple, Google, Cisco Systems, Synopsis, Broadcom
  - Applied Materials, Intel, Qualcomm, HP, NEC
  - URS Corp, Bechtel, Granite, ACCO Engineered Systems
  - PG&E, Caltrans, PUC, EBMUD, ENGEO
  - EnerNoc, Enovity, HDR
Degree Programs Offered

• Undergraduate Programs
  o 36%: Mechanical Engineering (BSME) ← largest major!
  o 24%: Civil Engineering (BSCE)
  o 22%: Computer Engineering (BSCompE)
  o 18%: Electrical Engineering (BSEE)

• Graduate Programs
  o MS in Engineering (Structural/Earthquakes)
  o MS in Engineering (Electrical/Embedded Systems)
  o MS in Engineering (Energy Systems)
Civil Engineering Areas of Study

- Structures
- Construction Management
- Geo-technical
- Environmental
Electrical Engineering Areas of Study

- Communications
- Digital Electronics
- Analog Electronics
- Power Electronics
- Robotics/Motion Control
Mechanical Engineering Areas of Study

- Mechanical Design
- Thermal-Fluid Systems
- Robotics/Control
Computer Engineering Areas of Study

- Multi-media
- Computer Networking
- Digital Systems
- Embedded Systems
School of Engineering personnel

Director: Dr. Kwok Siong Teh
- SCI 165, ksteh@sfsu.edu

Associate Director: Dr. Ed cheng
- SCI 123, ascheng@sfsu.edu

Office Manager: Marsha Harris
- SCI 163, mch7@sfsu.edu

Office Coordinator: Raul Contreras III
- SCI 163, raulc@sfsu.edu
Program Heads for CompE/EE, Civil E & ME:

**CompE & EE:** Dr. Tom Holton  
- SCI 170, tholton@sfsu.edu

**Civil Engr:** Dr. Timothy D’Orazio  
- SCI 168B, EJKuczynsk@aol.com

**Mechanical Engr:** Dr. Ed Cheng  
- SCI 123, ascheng@sfsu.edu

Transfer students to meet with Prog Heads to do TRANSFER EVALUATION today or ASAP!
Engineering Stockroom

Jimmy Zhang (SCI 140), jimmysoe@sfsu.edu

Michael Lino (SCI 140), mlino@sfsu.edu
College Programs for Advising

**College Center for Student Success (SCI 214)**
- (415) 338-2816  cssc@sfsu.edu
- GE Advising, general counseling, tutoring
- Student activities

**Undergraduate Advising Center (ADM 211)**
- GE Advising, Petitions

**Metro Engineering Academy (SCI 214)**
Transfer Evaluation for Transfer Students

• Have your transfer courses evaluated within first 2 weeks

• Bring Relevant Supporting Documents:
  o Planning Worksheet (pick up outside SCI 163)
  o Transcripts, DPR – print from within MySFSU
  o Course syllabi
  o International students: bring documents in English

• Check www.assist.org for transfer equivalency

• Only courses with C- or better transfer
Tenure / Tenure-Track Faculty (CE)

<table>
<thead>
<tr>
<th>Name</th>
<th>Degree</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheng Chen</td>
<td>Ph.D., Lehigh University, 2007</td>
<td>Structural and Earthquake</td>
</tr>
<tr>
<td>Timothy D'Orazio</td>
<td>Ph.D., U.C. Berkeley, 1982</td>
<td>Geotechnical &amp; Earthquake</td>
</tr>
<tr>
<td>Elahe Enssani</td>
<td>Ph.D., U.C. Berkeley, 1982</td>
<td>Environmental</td>
</tr>
<tr>
<td>Wenshen Pong</td>
<td>Ph.D., SUNY at Buffalo, 1994</td>
<td>Structural and Earthquake</td>
</tr>
<tr>
<td>Ghassan Tarakji</td>
<td>Ph.D., Clemson University, 1983</td>
<td>Transportation</td>
</tr>
<tr>
<td>Zhaoshuo Jiang</td>
<td>Ph.D., University of Connecticut, 2012</td>
<td>Structural/General</td>
</tr>
<tr>
<td>Jenna Wong</td>
<td>Ph.D., U.C. Berkeley, 2014</td>
<td>Structural/General</td>
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# Tenure / Tenure-Track Faculty (EE/CompE)

<table>
<thead>
<tr>
<th>Name</th>
<th>Degree</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Tom Holton</em></td>
<td>Ph.D., MIT 1981</td>
<td>Signal Processing</td>
</tr>
<tr>
<td>Hao Jiang</td>
<td>Ph.D., UC San Diego 2000</td>
<td>Integrated Circuits Design</td>
</tr>
<tr>
<td>Hamid Mahmoodi</td>
<td>Ph.D., Purdue University, 2005</td>
<td>VLSI</td>
</tr>
<tr>
<td>Hamid Shahnasser</td>
<td>Ph.D., Drexel University, 1989</td>
<td>Computer Networks</td>
</tr>
<tr>
<td>Xiaorong Zhang</td>
<td>Ph.D., U of Rhode Island, 2013</td>
<td>Embedded Systems</td>
</tr>
<tr>
<td>Fatemeh Tehranipoor</td>
<td>Ph.D., University Connecticut, 2017</td>
<td>Computer Security, IoT</td>
</tr>
</tbody>
</table>
# Tenure / Tenure-Track Faculty (ME)

<table>
<thead>
<tr>
<th>Name</th>
<th>Degree</th>
<th>Area</th>
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</thead>
<tbody>
<tr>
<td>A. S. (Ed) Cheng</td>
<td>Ph.D., UC Berkeley, 2002</td>
<td>Thermo Fluids</td>
</tr>
<tr>
<td>Ahmad Ganji</td>
<td>Ph.D., UC Berkeley, 1979</td>
<td>Thermo Fluids</td>
</tr>
<tr>
<td>Kwok Siong Teh</td>
<td>Ph.D, UC Berkeley, 2004</td>
<td>Materials/Nano</td>
</tr>
<tr>
<td>Mojtaba Azadi</td>
<td>Ph.D., U of Alberta, 2010</td>
<td>Robotics/Biomechanics</td>
</tr>
<tr>
<td>David Quintero</td>
<td>Ph.D., U of Texas, 2018</td>
<td>Mechatronics/Prosthetics</td>
</tr>
<tr>
<td>Fatemeh Khalkhal</td>
<td>Ph.D., Ecole Polytechnique de Montreal</td>
<td>Fluids Mechanics</td>
</tr>
</tbody>
</table>
Facilities (in Science Building)

- Materials Characterization Labs
- Soil Mechanics Lab
- Thermal Power/Combustion Lab
- Industrial Assessment Center (DOE-sponsored)
- Rapid Prototyping Lab
- Digital Signal Processing Lab
- Bioelectronics Lab
- Structural Testing Lab (NSF-sponsored)
- Nano Electronics Characterization Lab (NSF-sponsored)
- Advanced Materials Research Lab/Environmental Lab
- Intelligent Computing & Embedded Systems Laboratory
- Rehabilitation Robotics Lab
Selected On-campus Student Organizations

- Tau Beta Pi Engineering Honor Society (TBP)
- American Society of Civil Engineers (ASCE)
- Institute of Electrical and Electronics Engineers (IEEE)
- American Society of Mechanical Engineers (ASME)
- American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE)
- Society of Automotive Engineers (SAE)
- Society of Women Engineers (SWE)
- Society of Hispanic Professional Engineers (SHPE)
- National Society of Black Engineers (NSBE)

Look out for flyers and announcements regarding how to join these organizations.
Student Scholarships that you should apply for... (check website for announcements)

- Climate Change Scholarship (College-wide)
- David Cassa Memorial Scholarship (College-wide)
- NSF S-STEM Scholarship
- Feminists Scholarship
- IEEE-Maxheimer Scholarship
- Filanc Leadership Endowed Scholarship
- Michael Sugarman Endowed Scholarship
- Beth Pack Memorial Scholarship
- Women in Engineering Scholarship
- Hitachi Minority Endowed Scholarship
- PG&E Scholarship
- Zilka, Oseberg, Stadler, and Franco Scholarships
External Grants and Scholarships

- US Department of Energy, US Department of Education
- National Science Foundation, National Security Agency
- Air Force Research Laboratory
- National Aeronautics and Space Administration
- Pacific Gas & Electric
- City of San Francisco
- Caltrans, Agilent, AT&T
- Synopsys, Linear Technology, National Semiconductor,
- NEC and Sun Microsystems.
- Engineering scholarship website:
  http://engineering.sfsu.edu/current_students/financial_and_careers/scholarships_and_fellowships/index.html
Distinguished SFSU Engineering Alumni – scattered throughout the Bay Area

• YOU … (some day in the future)
  • Jayshree Ullal, President and CEO of Arista Networks; Formerly Senior VP at Cisco Systems
  • Ed Lam, VP at National Semiconductor, Sipex, and Advanced Analogic Technologies
  • Don Chan, VP at Synopsys
  • Stephen Lee, Director of Engineering at National Semiconductor and VP of Engineering at Advanced Analogic Technologies
  • Rajat Sewal, VP at EDATechForce
  • Guy Marom, President at Rhino Labs, Inc., President at Advanced Knowledge Associates
  • Karen Kubick: Sewer System Improvement Program Director, City of San Francisco
  • Beth Goldstein: Principal, Hydroconsult
  • Khaled W. Shahwan, PhD, Fellow-AIAA, Global Research & Development, Chrysler Technology Center
THINK YOU WILL GRADUATE?

Graduation Requirements
and Other Regulations
Graduation Requirements: Minimum GPA is...

GPA Requirements:
2.0 all college work
2.0 all SFSU work
2.0 all major work
2 groups of classes to complete at SFSU before you graduate

**MAJOR**
(91~93 units)
- Civil Engr: 127(91)
- Mech E: 129(93)
- Elect E: 129(93)
- Comp E: 128(92)

**GE**
(*36 units)
- A: A1, A2, A3, A4
- B: B1, B2, B3, B4
- C: C1, C2, C3
- D: D1, D2, D3
- UD-B, UD-C, UD-D

(+ Overlays: LLD, SJ, GP, ES, AERM)
Breakdown of Major units

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<thead>
<tr>
<th></th>
<th>Civil</th>
<th>CompE</th>
<th>EE</th>
<th>ME</th>
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<tbody>
<tr>
<td>LD Math/Sci</td>
<td>30</td>
<td>26</td>
<td>30</td>
<td>30</td>
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<tr>
<td>LD Engr</td>
<td>18</td>
<td>20</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>UD Engr</td>
<td>31</td>
<td>40</td>
<td>42</td>
<td>35</td>
</tr>
<tr>
<td>UD Engr Electives</td>
<td>12</td>
<td>6</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>91</strong></td>
<td><strong>92</strong></td>
<td><strong>93</strong></td>
<td><strong>93</strong></td>
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**Prerequisites:** Important to have passed before moving onto next-level courses

- **Course prerequisites are strictly enforced.** Students not meeting the prerequisites may be administratively dropped.

- All required lower division courses must be passed before upper division courses can be taken.

- **Examples:**
  - CHEM 180 → Engr 200 → Engr 309 → Engr 364 → Engr 464
  - Math 226 → Math 227 → Math 228 → Math 245
  - Math 226 → Math 227 → Engr 102 → Engr 201
Mandatory Advising → EVERY SEMESTER, do not miss this!

• Every student is assigned a Faculty Advisor

• Every student is required to see your Faculty Advisor every semester (Apr, Nov) BEFORE registration of courses

• Faculty needs to sign off your planning worksheet before your Registration Hold is removed

DO NOT SKIP Mandatory Advising!
GE for Engineering Students

Please refer to GE Flyer

Visit CoSE Student Success Center (SCI 214)
Graduation Requirements:
http://www.sfsu.edu/~bulletin/current/chcklst.htm

**Minimum Units**
- 120 units to graduate
- Residency requirement:
  - 30 units min completed at SFSU, including:
    - 24 units of upper div courses, 12 units in major and 6 units of upper division GE
- No changing of major after completing 96 units

**Maximum Units from:**
- Community College Transfer: **70 units**
- College of Extended Learning: 24 units
- CR/NC: 12 units in GE (not Major)
Final Reminders...

• Attend Mandatory Advising every semester

• Transfer students: see Program Head asap

• Manage your time properly
  o Be “Present”
  o Stay focused

• Reach out for help, EARLY!

• Work hard and all the best!
QUESTIONS?