Advising for Transfer Students

School of Engineering
San Francisco State University

2012
Outline of the Presentation

• Introduce the SFSU School of Engineering
• Information for Transfer Students
  o Graduation requirements
  o Major requirements
  o Transfer eligibility
School of Engineering
School of Engineering – Degree Programs

• Undergraduate
  o Civil Engineering (BSCE)
  o Computer Engineering (BSCmpE)
  o Electrical Engineering (BSEE)
  o Mechanical Engineering (BSME)

• Graduate
  o MS in Engineering (three concentrations on Structural/Earthquakes, Electrical/Embedded Systems and Energy Systems)

• Total School of Engineering has:
  o Approximately 20 Faculty and 1050 students
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
Who Employs SFSU Engineering Graduates?

NEC

National Semiconductor

CT

Lockheed Martin

We never forget who we’re working for™

PG&E

Applied Materials®

HP®

San Francisco City and County Seal
Learning through Hands-on Experience

- Rigorous Engineering Curriculum
- Strong Theoretical Background
- Hands-on Experience
- Labs with Modern Equipment
- Building Teamwork
- Written and Oral Communications Skills
Engineering Design Projects: Civil Engineering

Wood Bridge

2005 National Timber Bridge Design Competition 1st Place
ASCE-SFSU Steel Team 2007
2nd place in Pacific Region among 9 universities
2110 National Timber Bridge Design Competition

To view individual entries, go to [http://www.msrdc.org/b-results10.htm](http://www.msrdc.org/b-results10.htm)

- SFSU won the second place in the Best overall Design, Best Support Structure, Best Deck, Most Aesthetic Bridge and Most Innovative Design categories in the 2011 National Timber Bridge Design Competition.
Engineering Design Projects: Mechanical Engineering

Human Powered Vehicle
Engineering Design Projects: Electrical Engineering

- MicroMouse

- Robotics
Student Activities

- Student Societies
  - ASCE - American Society of Civil Engineers
  - ASHRAE - American Society of Heating, Refrigeration & Air Conditioning Engineers
  - ASME - American Society of Mechanical Engineers
  - IEEE - Institute of Electrical and Electronics Engineers
  - ISA - Instrumentation, Systems, and Automation Society
  - NSBE - National Society of Black Engineers
  - SAMPE - Society for the Advancement of Material and Process Engineers
  - SHPE - Society of Hispanic Professional Engineers
  - SWE - Society of Women Engineers

- Student Advisory Board (SAB)
  - Needs of Students being represented
School of Engineering News

- Excellent new faculty in MEMS, RF Analog, Robotics/Control, Structural/Earthquakes, Digital Design, and Thermal Fluid areas
- New Structural Lab/Electrical lab funded by NSF
- New Analog Design Center (funded by industry)
- Two New NSF-Major Research Instrumentation grants
- New grants/scholarships funded by Department of Education, Department of Energy, National Science Foundation and NASA
# Tenure / Tenure-Track Faculty (CE)

<table>
<thead>
<tr>
<th>Name</th>
<th>Degree</th>
<th>Area</th>
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<tbody>
<tr>
<td>Cheng Chen</td>
<td>Ph.D., Lehigh University, 2007</td>
<td>Structural and Earthquake</td>
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<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>
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# Tenure / Tenure-Track Faculty (EE)

<table>
<thead>
<tr>
<th>Name</th>
<th>Degree</th>
<th>Area</th>
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</thead>
<tbody>
<tr>
<td>Tom Holton</td>
<td>Ph.D., MIT 1981</td>
<td>Signal Processing</td>
</tr>
<tr>
<td>Sung Hu</td>
<td>Ph.D., Oregon State University</td>
<td>Digital/Computer</td>
</tr>
<tr>
<td>Hao Jiang</td>
<td>Ph.D, UC San Diego 2000</td>
<td>Integrated Circuits Design</td>
</tr>
<tr>
<td>Shy Shenq Liou</td>
<td>Ph.D., UT Austin, May, 1989</td>
<td>Power Electronics</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>
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## Tenure / Tenure-Track Faculty (ME)

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<thead>
<tr>
<th>Name</th>
<th>Degree</th>
<th>Area</th>
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<tbody>
<tr>
<td>Ozkan Celik</td>
<td>Ph.D., Rice University, 2011</td>
<td>Robotics</td>
</tr>
<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>V. V. Krishnan</td>
<td>Ph.D., UC Berkeley, 1972</td>
<td>Control Systems</td>
</tr>
<tr>
<td>Kwok-Siong Teh</td>
<td>Ph.D., UC-Berkeley, 2004</td>
<td>Materials</td>
</tr>
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Selected On-campus Student Organizations

• Tau Beta Pi Engineering Honor Society
• 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)
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.
- Internal scholarships from School of Engineering
- Engineering scholarship website:
  http://engineering.sfsu.edu/current_students/financial_and_careers/scholarships_and_fellowships/index.html
School of Engineering: Student Scholarships

• Femineers Scholarship Endowment
• IEEE-Maxheimer Scholarship
• Filanc Leadership Endowed Scholarship Fund
• Sugerman Endowed Scholarship Fund
• Beth Pack Memorial Scholarship Fund
• Women in Engineering Scholarship Fund
• Hitachi Minority Endowed Scholarship Fund
• PG&E Scholarship Fund
• Zilka, Oseberg, Stadler, and Franco Scholarship Funds
Distinguished SFSU Engineering Alumni

- 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
Graduation Requirements and Other Regulations
SFSU Graduation Requirements

- Major Requirements
- General Education
- Written English Proficiency
  - ENG 114, 214, JEPET (ENG 414) or GWAR
- US History & Government + California State & Government
- Basic Information Competence (Library)
Graduation Requirements (cont.)

- **Minimum Units**
  Engr BS degree: 126 units (CE), 128 (ME & EE), 129 (CompE)
  Residency: 30 – 24 upper - 12 major; 9 GE

- **Maximum Units**
  JC Transfer: 70
  Extended Ed: 24
  CR: 30%
Graduation Requirements (cont.)

- GPA Requirements
  - 2.0 all college work
  - 2.0 all SFSU work
  - 2.0 all major work

- Filing Application for Graduation
  One application for each major/minor
  One type of degree (BA or BS) / semester
Engineering Major Requirements

• Lower Division (44+ units)
  o 15 units of Math, 12 units of Phys, 5 units of Chemistry
  o 18+ units of Lower Division Engineering Courses

• Upper division (45+ units)
  o 39+ units of Upper Division Engineering Courses
  o 6+ units of Elective Engineering Courses

• GE (33 units)
  o GE is complicated. See one of our GE advisors when you get to campus.
• Two ‘patterns’ of GE
  o University GE
  o Engineering GE
• University GE: 48 units
  o Segment I: Basic Subjects – 12 units
    ▪ Written Communication, Oral Communication, Critical Thinking, Quantitative Reasoning
  o Segment II: Arts and Sciences Core – 27 units
    ▪ Physical and Biological Sciences Area (PBS), Behavioral and Social Sciences Area (BSS), Humanities and Creative Arts Area (HCA)
  o Segment III: Relationships of Knowledge – 9 units
• Engineering GE: 33 units
  o Segment I: Allows double counting of Math 226
• The Bottom line: See one of the School’s GE advisors!
Transfer Student Eligibility

• You are an upper division transfer (Junior and senior students) who have completed 60 or more transferable semester units
• Earn a college grade point average of 2.00 (2.40 for non-residents) or better in all transferable courses
• Be in good standing at the last college or university attended
• Complete 30 semester units of general education, including four basic skills courses:
  o One course in oral communication
  o One course in written composition
  o One course in critical thinking
  o One course in mathematics or quantitative reasoning, with intermediate algebra as a prerequisite
Transfer Student Eligibility (cont’d)

• Eligibility for admission is based on:
  o Minimum CSU eligibility standards for local area students.
  o Higher standards will apply to non-local area applicants.

• Applicants must choose a major.
  o You may not choose “undeclared.”
  o Change of major during the application process is prohibited.

• Important deadline!
  o Please check www.sfsu.edu for Transfer application deadline
Transfer Equivalencies

- Check [www.assist.org](http://www.assist.org) for transfer equivalency
- Only courses with C- or better transfer
- School of Engineering must evaluate major-course transfers
  - See program head within the first two weeks of semester the semester. Important!
  - If course is not on assist.org, students need to bring all relevant supporting material, including course syllabi and books
QAdvice for transfer students

• Complete as much of your lower-division program as possible before you transfer
  o Chemistry: 5 units
  o Math: 15 units
    ▪ Calculus: 12 units, generally three courses
    ▪ Linear Algebra and Differential Equations, 3-6 units
  o Physics: 12 units (generally three courses, including labs)
  o Computer Science: for Computer Engineering
Advice for transfer students

• Complete as much of your lower-division program as possible before you transfer
  o Engineering
    ▪ Introduction to Engineering, Circuits, Introduction to Computers, Statics, and Dynamics, Survey, Introduction to C programming, Surveying, Matlab, Materials of Engineering, Introduction to Computer Engineering, etc. Please see the following planning worksheet to identify lower division engineering courses that can be transferred to one of our four engineering programs for more information.
    ▪ http://engineering.sfsu.edu/current_students/eforms_download/index.html
Prerequisite

- 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.
Program Planning

<table>
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<tr>
<th>Term</th>
<th>Year</th>
<th>Course Numbers</th>
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Transferred Courses

Students wishing to transfer Math, Science, Computer Science and Engineering courses from other institutions must see the Program Head of Electrical and Computer Engineering in their first term of residence at SFSU. If you haven’t yet done your transfer credit evaluation with the Program Head, you may not be able to enroll for courses, so do it now!

Students transferring from California institutions just need to bring in their transcripts and this worksheet. Transfers of courses from other institutions are evaluated on a case-by-case basis. Students from these institutions should bring all relevant supporting material, including course syllabi, books, etc.

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Institution</th>
<th>Course</th>
<th>Units†</th>
<th>Term/Year</th>
<th>Grade</th>
<th>Approval</th>
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<tbody>
<tr>
<td>CHEM 115</td>
<td>General Chemistry I Essential Concepts of Chem</td>
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<tr>
<td>MATH 226</td>
<td>Calculus I</td>
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<tr>
<td>MATH 227</td>
<td>Calculus II</td>
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<tr>
<td>MATH 228</td>
<td>Calculus III</td>
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<tr>
<td>MATH 245</td>
<td>Elementary Differential Equations &amp; Linear Algebra</td>
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<tr>
<td>PHYS 220/222</td>
<td>General Physics with Calculus I &amp; Lab</td>
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<tr>
<td>PHYS 230/232</td>
<td>General Physics with Calculus II &amp; Lab</td>
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<tr>
<td>PHYS 240/242</td>
<td>General Physics with Calculus III &amp; Lab</td>
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<tr>
<td>ENGR 120</td>
<td>Introduction to Computer Engineering</td>
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<tr>
<td>ENGR 205</td>
<td>Electric Circuits</td>
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<tr>
<td>ENGR 206</td>
<td>Circuits and Instrumentation</td>
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<td>CSC 210</td>
<td>Introduction to Computer Programming</td>
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<tr>
<td>CSC 212</td>
<td>Introduction to Software Development in UNIX</td>
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<tr>
<td>CSC 213</td>
<td>Fundamental of Computer Science</td>
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</tbody>
</table>

† Express as semester units. Each quarter unit = 2/3 semester units

Important: Require students to get this done early.
Transfer evaluation

- Transfer students need to have the transfer courses evaluated within the first two weeks of the semester. Students need to bring all relevant supporting material, including course syllabi, books, etc when requesting transfer credits to the Program Head.
Orientation meeting for New/Transfer students

- School of Engineering hosts an orientation meeting for incoming new and transfer students in the third or fourth Wednesday of each semester from 1:10-2:00 in SCI 256. Please check out engineering office in SCI 163 or engineering.sfsu.edu website for more up-to-date information.
Advisors

• GE advisor and International Student Advisor:
  o Dr. K. Teh (ksteh@sfsu.edu)

• GE advisor
  o Dr. V. Krishnan (krishnan@sfsu.edu)

• MESA program Director
  o Dr. N. Ozer (mnozer@sfsu.edu)
Program Head

- Dr. T. Holton ([tholton@sfsu.edu](mailto:tholton@sfsu.edu)) for Electrical and Computer Engineering programs.
- Dr. Ed Cheng ([ascheng@sfsu.edu](mailto:ascheng@sfsu.edu)) for Mechanical Engineering
- Dr. T. D’Orazio ([ejkuczynsk@aol.com](mailto:ejkuczynsk@aol.com)) for Civil Engineering
Contact Information

• Call us at (415) 338-1174
• Website: engineering.sfsu.edu
• Come to our open house and orientation meetings
• Make an appointment to see the Director, Dr. W. Pong (wspong@sfsu.edu), SCI-163
• Send us an email at engrasst@sfsu.edu