Computer Engineering
Electrical Engineering
Robotics Engineering
Network & Digital Technology
Summer Orientation 2015
Presentation Overview

- Important People
- Your Majors
- Requirements & Details
- Academic advising
- Fall Schedules
- The Future
Introductions: BSOE Undergraduate Advising and Student Affairs Staff

Tracy Larrabee, Associate Dean

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Computer Engineering (CE)
Robotics Engineering (RE)
Network & Digital Technology (NDT) &
Electrical Engineering (EE)
Computer Engineering: offers 3 Majors

- **COMPUTER ENGINEERING, B.S. WITH FIVE DISTINCT CONCENTRATIONS**
  - Systems Programming
  - Robotics and Control
  - Computer Systems
  - Networks
  - Digital Hardware

- **ROBOTICS ENGINEERING, B.S.**

- **NETWORK AND DIGITAL TECHNOLOGY, B.A.**

- **COMPUTER ENGINEERING B.S./M.S. PROGRAM**
Details: Computer Engineering

- More or less same lower division requirements (numbered 1-99)
  - Math, Computer Engineering, Computer Science and Physics
- Computer Engineering major (minimum of 14 upper division courses, numbered 100-199)
  - 8 required courses
  - 4 to 5 elective courses, depending on concentration
  - 2 to 3 senior design or thesis courses
- Robotics Engineering major (minimum of 15 upper division courses)
  - 11 required courses
  - 1 advanced robotics elective course
  - 1 elective course
  - 2 to 3 senior design or thesis courses
- Network & Digital Technology major (minimum of 8 upper division courses)
  - 4 required courses
  - 3 elective course
  - 1 design course (capstone)
Details: Electrical Engineering

- Focus on math and physics
  More math than Computer Engineering
  Some computer science and engineering

- Broad discipline that emphasizes three general areas
  Electronics/Optics including digital and analog circuits/devices
  Communications
  Micro-technology, nanotechnology and biomedical devices

- Two Concentrations
  Communications, Signals, Systems & Controls
  Electronics & Optics

- Minimum of 15 upper division courses
  9 required courses
  4 elective courses from two concentrations
  3 senior design courses or senior thesis
Computer Engineering vs Computer Science vs Electrical Engineering
CE and EE are collaborative!

Annual CMPE 118 - Mechatronics competition
The Center for Sustainable Energy and Power Systems (CenSEPS) is poised to become a major hub for innovation in emerging clean energy technologies and tackling the challenges of energy sustainability.

https://censeps.soe.ucsc.edu/
Student Interests + Engineering = Innovative Careers!

Find out what you love to do and do that. It’s that simple.

~ Dr. A. L. Garcia
Computer, Robotics and Network & Digital Technology Careers

- Circuit and chip design
- Enterprise systems
- Embedded systems
- Data Networking
- Telecommunications Systems
- Gaming systems
- Health care
- Assistive technology
- Computer controlled systems
- ...
Electrical Engineering Careers

- Design, develop, test, and supervise the manufacturing of electrical equipment
- Radar and navigation systems
- Semiconductor industry
- Electrical motors
- Power generation
- Satellite systems
- ...
Research and Internships

- Fall is the time to shop for summer internships
- Read the weekly e-newsletter
- Seek out faculty
- Go to career fairs and company “meet and greets” (Google, Microsoft, eBay, Adobe, HP, Cruzio, and many lesser known names)
- http://www.soe.ucsc.edu/research
Two Types of Academic Advising

- **Major/Department Advising**
  - BSOE Peer Advisers
  - Professional Staff Advisers
  - Faculty Advising

- **College Advising**
BSOE Undergraduate Advising & Student Affairs Services

- 225 Baskin Engineering Building
- Drop-off and/or pick-up forms
- Ask general questions
- Get assistance with academic plans
- Monday through Friday
  
  9:00-11:30 am
    ✓ Make appointments with staff for afternoon

  1:30-4:00 pm
    ✓ Meet with Staff Advisers

Advising Workshops: Consult Schedule

Email: advising@soe.ucsc.edu
Important Undergraduate Advising Office Resources

- BSOE Undergraduate Advising website: [ua.soe.ucsc.edu](http://ua.soe.ucsc.edu)
- BSOE Undergraduate weekly e-newsletter
- BSOE Advising Workshops
  - Major Qualifications
  - Major Declaration
What to take in the Fall

Sign up for 3 Courses (Math+Major+College/GE course)

1. Math
   ✓ In order to enroll into a Math course, must have completed Math placement, have AP, or college level credit.
   ✓ No Placement Exam yet? Exams completed during summer orientation will be posted by August 3rd.
   ✓ Specific course will depend on math placement exam score, AP, or college level credit. Students should focus on Calculus Math 19A/B (or Math 3) Do not take the following Math series courses: Math 11A, AMS 11A or 15A, or Econ 11A

2. Major course
   • Specific course will depend on major, and in some cases math preparation.

3. College Core course or a General Education (GE) course
Getting Started

CE/RE/NDT
- **Fall**
  - Math
  - CMPE 8 or CMPE 12/L or Physics 5A/L
  - College Core
- **Winter**
  - Math
  - CMPE 12/L OR CMPE 13/L or Physics 5B/M
  - College Core
- **Spring**
  - Math
  - CMPE 13/L or 12B/M or Physics 5C/N
  - CMPE 80E or 2nd math

EE
- **Fall**
  - Math
  - Physics 5A/L or CMPE 8
  - College Core
- **Winter**
  - Math
  - Physics 5B/M
  - EE 80T
- **Spring**
  - Math
  - Physics 5C/N
  - College Core or GE
Enrollment for Fall 2015

- Please refer to “What classes do I take in Fall?” handout to assist with choosing courses
- What do I do if a course I want to take is full?
  - Sign up for the wait-list on Monday, August 10\textsuperscript{th} at 3:00pm
  - Website with more information: 
    https://ua.soe.ucsc.edu/wait-list-info
- Enroll in back-up courses
- Be flexible!
- Most courses will be offered again in Winter quarter
What’s Next?

Today:
- Questions and Answers
- Enroll in Fall Classes

Summer:
- Spend some time reviewing the BSOE website [http://ua.soe.ucsc.edu](http://ua.soe.ucsc.edu)
- Brush up on math skills
- Check out UCSC Career Center website and resources
- Regularly check (or redirect) your SlugMail!

Fall:
- BSOE Fall Orientation, Tuesday, September 22, 2015
  9:00am – 12:00pm @ Media Theater
  - Department/Major Break-out Sessions with Faculty
  - BSOE Fall Welcome Event @ Engineering Courtyard
Questions??