Welcome
A Dedicated Leadership Team
Why Engineering?

Human Knowledge
- Design
- Analyze
- Develop
- Communicate
- Manage

Human Need
- Manufacture
- Assemble
- Test
- Evaluate

Grand Challenges
Your future impact as an engineer

Feeding the world

Managing the nitrogen cycle

Making sustainable energies economical

Restore and improve urban infrastructure

Reverse Engineer the Brain

Advance health informatics

Engineer better medicines

Enhance virtual reality

Prevent terror

Provide access to clean water

Secure cyberspace
Rewards and Opportunities of an Engineering Career

1. Job satisfaction
2. Varied opportunities
3. Challenging work
4. Intellectual development
5. Social impact
6. Financial security
7. Prestige
8. Professional environment
9. Unemployment rate of engineers is ~ 2%
Why UConn Engineering?
Bioscience CT & JAX Lab

$865M CT and $1.1B JAX Lab Investments
- New research facilities
- New clinical facilities
- Emphasis on new diagnostics, devices, & treatments for personalized medicine
UConn Tech Park

Hub for Innovation

- $132M R&D Facility
- Incubators
- $40M in Advanced Equipment
Partnership with GE

- $7.5M
  - $5M gift/endowment
  - $2.5M R&D
- Oct. 9th announcement
  Governor Malloy, President Herbst, Provost Choi,
  GE Executives
Strong CT Investment

- UConn 2000 & 21\textsuperscript{st} Century UConn
  - Teaching Space
  - Research Space
  - $1.2B Balance
Convergence Engineering Building
290 New Hires

Emphasis:

• Advanced Manufacturing
• Materials Genomics
• Environment & Sustainability
• Digital Frontiers
• Genomics, Manufacturing & Life Sciences
• Language & Culture
• Revolutionizing Education
• Health & Health Policy
Current Student/Faculty Ratio

- UConn
- Maryland
- RPI
- Purdue
- Penn State
- Syracuse
- NEU
Growth in Engineering Faculty

2006 2007 2008 2009 2010 2011 2012 2013
18 Chair and Named Professorships
28 NSF CAREER Awards
1 Presidential Early Career Award
5 ONR Young Investigator Awards
2 Army Young Investigator Awards
1 NASA Young Investigator Award
Over 43 Fellows of professional societies
45 Editors-in-Chief & Associate Editors
SOE Faculty
We Wrote the Book
• Bryan Huey, Materials Science & Engineering
  • B.S. Degree from Stanford
  • Ph.D. Degree from U. Penn

• Atomic Force Microscopy allows nanoscale measurements by probing surfaces with a sharp tip
SOE World Class Faculty

- Wei Sun, Mechanical Engineering
  - Ph.D. Degree from Pittsburgh
  - Percutaneous Transvenous Mitral Annuloplasty
• Allison MacKay, Civil & Environmental Eng.
  • B.S. Degree from U. of Toronto
  • Ph.D. Degree from MIT

Remediation of organic contaminants in the soil and water
Alex Russell, Computer Sci. & Eng.
Ph.D. Degree MIT

Computational complexity of classical and quantum algorithms, cryptography and distributed computing
SOE World Class Faculty

Prof. Leslie Shor
Chemical and Biomolecular Engr.
Ph.D., Rutgers University

Prof. Ranjan Srivastava
Chemical and Biomolecular Engr.
Ph.D. U of Maryland
What Do Engineers Do?
Why UConn?
Industry Partnerships: Relevant Education

- 75 R&D projects with industry
- Joint proposals with industries
- 30 Associates partners at IMS
Industry Partnerships:

150 capstone senior design projects
Assistant Dean Marty Wood
Undergraduate Education & Diversity
What are the requirements for a great Engineering Program?

1. Safe Student Environment
2. World Class and Diverse Faculty, Staff and Students
3. Nationally & Internationally recognized Programs and Centers of Excellence
4. Access to faculty, teaching assistants, staff and facilities
5. Carnegie Ranked Research Intensive University
6. Research Opportunities (REUs)
7. Corporate involvement
8. Career Centers
UConn Engineering Provides

- Eleven EAC and CAC Accredited Engineering Programs.
- Many Choices: majors, minors, concentrations, plus . . . . . .
• Biomedical Engineering
• Chemical, Materials and Biomolecular Engineering
• Civil & Environmental Engineering
• Computer Science & Engineering
• Electrical & Computer Engineering
• Mechanical Engineering
UConn Engineering provides CHOICES & FLEXIBILITY!

- Biomedical Engineering (B.S.E., M.S., Ph.D.)
- Chemical Engineering (B.S.E., M.S., Ph.D.)
- Civil Engineering (B.S.E., M.S., Ph.D.)
- Computer Engineering (B.S.E.)
- Computer Science (B.S.)
- Computer Science & Engineering (B.S.E., M.S., Ph.D.)
- Electrical Engineering (B.S.E., M.S., Ph.D.)
- Engineering Physics (B.S.)
- Environmental Engineering (B.S.E., M.S., Ph.D.)
- Management & Engineering for Manufacturing (B.S.)
- Materials Science & Engineering (B.S.E., M.S., Ph.D.)
- Mechanical Engineering (B.S.E., M.S., Ph.D.)
Available Student Resources

1. Faculty advisors and professional staff
2. Teaching Assistants
3. Tutors, peers, student professional societies
4. Q (Quantitative) - Center
5. W (Writing) - Center
6. Academic Achievement Center
7. Living Learning Communities
8. Wellness and prevention programs
9. SCHOLARSHIPS
   a. University
   b. School of Engineering
Flexible first year curricula

**First Semester**

- Mathematics
- Science
- Engineering (ENGR 1000)
- Engineering (CSE 1010)
- English

- Total = 16 credits

**Second Semester**

- Mathematics
- Science
- Engineering (either ENGR 1166 or CSE 1102)
- General Education 1
- General Education 2

- Total = 17 credits
Fourth through sixth academic semester

- Study Abroad
- Complete a Co-Op work experience
- Obtain a summer Internship
- Participate in Research Experience for Undergraduates (REU)
- Determine their complimentary Minor and Concentration
- Consider Community Involvement
- Balance: Academics- Social- Co/Extracurricular Activities
Senior Year

1. Participate in corporate sponsored Senior Design Project – Student team, Corporate Engineers and Faculty Advisor
2. Obtain an entry level position (salary ranges- $55,000 - $70,000)
3. Enter Graduate School
4. Become a Mentor
Career Paths for Engineers

1. Engineer/ Scientist/ Professor
2. Corporate ladder and Management
3. Independent Entrepreneur
4. Military or Government
5. Engineering and social service aboard
6. Graduate work outside engineering
7. Engineers can pursue
   - Business
   - Medicine
   - Law
   - Entrepreneurship
   - Politics
1. Nationally, 6-yr grad rate for engineers is ~41%
2. For the 2005 cohort at UConn, 6-yr grad rate is ~71%
3. In 2010, the frosh-soph retention rate was 98%
4. Engineering studies will be tough and you’ll be tested
5. All of you have the academic background & credentials to succeed
6. But, you’ll need to make that commitment!
Why UConn?

1. Living and Learning Communities
   Engineering House  Eurotech
   Eco-House        Honors
2. 84 hours of tutoring available each week
3. 4 NSF- REU sites
4. Outreach through Engineering
   Ambassadors
5. Professional growth through Oak
   Leadership
6. Innovate through Startup CT, Crow Prize,
   Bozorgmanesh entrepreneurship
Thank you!

Let us meet some students and an alumnus