College of Engineering Address:
State of the College, May 2015
Overview

① People Update
② College Trends
③ Some programmatic updates
④ Strategic Plan Report Card
⑤ Questions and Answers
In Memoriam:
Cathy Pieronek
April 9, 2015
Record Year of Hiring New Faculty: 2014-2015

Tom Degnan, CBE

Ken Christensen, AME
Record Year of Hiring New Faculty: 2014-2015

David Chiang, CSE

Chaoli Wang, CSE
Record Year of Hiring New Faculty: 2014-2015

Tom Juliano, AME

Pinar Zorlutuna, AME
Record Year of Hiring New Faculty: 2014-2015

Hirotaka Sakaue, AME
Zhangli Peng, AME
Record Year of Hiring New Faculty: 2014-2015

Jennifer Schafer, CBE
Jon Whitmer, CBE
Record Year of Hiring New Faculty: 2014-2015

Dong Wang, CSE
Jon Chisum, EE
Record Year of Hiring New Faculty: 2014-2015

Kyle Doudrick, CEEES
Promotions! (to Full Professor)

Nitesh Chawla, CSE
Elaine Zhu, CBE
Promotions! (Associate Professor w Tenure)

Hai Lin, EE
Kapil Khandelwal, CEEES
Promotions! (Associate Professor w Tenure)

David Go, AME

Basar Bilgicer, CBE
Renewals: Assistant Professors

Anthony Hoffman, EE  
Ruilan Guo, CBE
Renewals: Assistant Professors

Collin McMillan, CSE

Tengfei Luo, AME
Renewals: Assistant Professors

Jeremy Zartman, CBE
Our New Director of Engineering and Science Computing, Mike Rupley
Patrick Flynn

• The inaugural Duda Family Professor of Engineering
  - CSE & EE Prof
  - IEEE Fellow
  - Co-Director, Computer Vision Research Laboratory
Eric Jumper

• The Roth-Gibson Professor of Engineering
  - AME Prof
  - AIAA and DEPS Fellow
  - Air Force Commendation Medals
Recent National Award Winners
“The more we strive to secure a common good corresponding to the real needs of our neighbors, the more we effectively love them. Every Christian is called to practice this in charity, in a manner corresponding to his vocation and according to the degree of influence he wields in society.” — Pope Benedict XVI
Mission Statement: At Notre Dame, out of love for our neighbors, we are engineering a peaceful, healthy, and sustainable world.
BS Degrees

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<th>YEAR</th>
<th>BACHELOR DEGREES GRANTED</th>
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Retention Statistics: EG- vs nEG-Intents

[Graph showing retention statistics over years for EG- and nEG-Intents]
FY-EG Enrollment Trends

EG 10111 is 40% larger than 10 years ago
Retention Statistics - All

> 80% of all students start EG 10111 retained to sophomore year
Male & female students retained at comparable rates

The College of Engineering
at the University of Notre Dame
Research Expenditures

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<th>YEAR</th>
<th>RESEARCH EXPENDITURES ($M)</th>
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Summer Study Abroad Update

- Financial Aid
  - 36% Received FA in 2013
  - 48% Received FA in 2014
- URM Participation
  - 21% in 2014
- New SP Semester Opp in Rome
Biomedical Engineering Update

① Enthusiasm from all stakeholders

② Focal areas: (1) precision medicine, (2) tissue and cellular engineering, (3) diagnostics engineering and global health, (4) biomechanics and orthopaedics, (5) optics and photonics, and (6) computational medicine and data mining

③ BME will have major impact on undergrad students, women in engineering, research

④ Timeline: Launch Program and Dept in 2016
COE 2015

- 129 T/TT Faculty
- 30+ Filled Endowed Chairs
- 365 Senior BS Degrees
- ca. $50 M Research Exps
- > 500 Graduate Students
- 75+ PhDs
- 1800+ Undergrads

2015 College of Engineering

The College of Engineering at the University of Notre Dame
Form and Educate Engineering Leaders of Unsurpassed Ability

Focus Research Efforts on Areas of Highest Societal and Academic Impact

Develop Innovative and Effective Opportunities Beyond the ND Classroom For All Students

Drive Economic Impact Through Technical Innovation

Strategic Plan
Focus Research Efforts on Areas of Highest Societal and Academic Impact

- Focused Hiring
- Grad Fellowships
- Bioengineering
- PhD and MS Programs

Form and Educate Engineering Leaders of Unsurpassed Ability

- Flexible Programs
- Experiential Learning
- SPF Hires
- Humanities
- PhD Development

Develop Innovative and Effective Opportunities Beyond the Classroom For All Students

- Overseas Expansion
- Trading Partner
- Local Partnerships
- Communication

Drive Economic Impact Through Technical Innovation

- Innovation Incentives
- Links to ESTEEM and MSPL
- Commercialization Funds
- Local Partnerships

The College of Engineering at the University of Notre Dame
Report Card on Strategic Plan

① Focus Research on Areas of Highest Societal and Academic Impact

i. Focused Hiring (CBE, Computational Science and Engineering, Data Analytics, Circuits, “best talent”)

ii. Endowed Graduate Fellowships (Remick, Dilling, Bufalino, Melchor, others)

iii. Biomedical Engineering
Some Development Successes: New Endowed Graduate Fellowships
Some Development Successes: New Endowed Graduate Fellowships (con’t)
Some Development Successes: New Endowed Professorships
Report Card on Strategic Plan (con’t)

② Form and Educate Engineering Leaders of Unsurpassed Ability

i. Flexible programs (SCHs, Study Abroad offerings, online/digital)

ii. Experiential learning/project based learning

iii. SPF Hires (Bui, Seelinger, Brockman, more coming)

iv. Arts and humanities (WAVES, other)

v. Engineering leadership program

vi. Grand Challenges Scholars Program
Report Card on Strategic Plan (con’t)

③ Develop Effective and Innovative Opportunities Beyond the ND Classroom for all students

i. Study Abroad major expansion

ii. Trading partners: PUC, Pazmany, Imperial?, Irish Universities

iii. Local partners: City of South Bend

iv. Exploring connections to Social Sciences, Law, others
Report Card on Strategic Plan (con’t)

④ Drive Economic Impact through Technical Innovation

i. Innovation incentives: First Source Commercialization Award, stipend for disclosures, enhanced policy on royalty sharing

ii. ESTEEM and MSPL

iii. Commercialization Funds: IIF and POTDC

iv. Local Startups and Partners: EMU, Fcubed, Aunaytics, Data Realty, NanDio, First Source
Questions/Comments?