The Pennsylvania State University

College Of Engineering

and

Hal and Inge Marcus Department of Industrial and Manufacturing Engineering
COLLEGE OF ENGINEERING:

- Enrolls the most undergraduates of all Penn State Colleges
- Awarded over 85,000 Engineering Degrees
- 70,000 living alumni
- Fall 2006 Engineering entering students had the highest Math and Overall SAT scores in the University
PSU ENGINEERING ranks among the largest institutions in the U.S.

U.S. Engineering Degrees Awarded in 2005/06
- 2nd in B.S. degrees awarded
- 6th in B.S. degrees awarded to women
- 22nd in M.S. degrees awarded
- 7th in Ph.D. degrees awarded

U.S. News - published in 2006
- 14th in U.S. undergraduate engineering programs
- 19th in U.S. graduate engineering programs
## 2006 Rankings
Published in 2007

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<th>Undergraduate</th>
<th>Graduate</th>
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<tr>
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<td>Nuclear</td>
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Faculty Profile

FALL 2006

University Park: 280

Eight NSF Career Awards to junior faculty.
UNDERGRADUATE STUDENTS

Fall 2006

- 7303 undergraduate students
- 1271 B.S. degrees
1425 graduate students at UP
- M.S./M Eng/QMM: 453
- Ph.D.: 914

2005/06 Degrees:
- 301 M.S. Degrees
- 162 Ph.D. Degrees
Research Activities

2005/06 Research Expenditures: $96.5M

STRATEGIC RESEARCH THRUSTS:

• Biological Systems
• Energy and Environmental Systems
• Information, Communications and Computational Technologies
• Infrastructure Systems
• Materials and Manufacturing
COLLEGE OF ENGINEERING
Strategic Plan Goals

- World class engineer education framework
- Strong emphasis on multidisciplinary research focused on:
  - Energy/Environment
  - Health Care/Life Sciences
  - Information/Computation
  - Infrastructure
  - Materials/Manufacturing
Major University Research/Education Initiatives

- Energy/Environment
  - 20 new faculty positions

- Information and Computing
  - Institute for Scientific Computing

- Health Care and Life Sciences
  - Presidential planning committee appointed to define University initiatives
Penn State IME Overview

- Established in 1908
- 7,200 Alumni
- 25 Faculty
- 13 Staff
  - 6 Technical
  - 7 Administrative
- 320 Undergraduate Students
  (Juniors and Seniors)
- 54 M.S. Students
- 109 Ph.D. Students
Department Research Paradigm

(P. Cohen, 2005)
Overview of Koubek’s Research
Koubek’s Research On Expertise and Usability

Descriptive Studies

Conceptual Models

Predictive Modeling

Application and Practice

Super-Expert Cognitive Performance

Development of a Model of Human Skill Requirements for AMT, K.H. Tang

HF in Service Quality Measurement, (L. Strawderman)

UPT: The Usability Prediction Tool, D. Benysh

Knowledge Degradation, J. Kim

International Interfaces (G. Tobler)