CEAE Overview

CEAE Vision

Excel in research and education of its students for leadership in the sustainable development, management, and security of civil infrastructure systems and natural resources for societal needs.

Presentation by Keith R. Molenaar to the CEAE Executive Advisory Board on 9/19/2011

CEAE Leadership

Keith Molenaar
Chair

Rajagopalan Balaji
Assoc Chair for Civil

Gregor Henze
Assoc Chair for AREN

Angela R. Bielefeldt
Undergrad Comm Chair

R. Scott Summers
Graduate Comm Chair

Araceli Warren
Office Manager
CEAE by the Numbers

Degree Programs
- Architectural (BS, MS, PhD)
- Civil (BS, MS, PhD)
- Environmental (BS)

46 Full-time faculty
- 41 Tenure-Track
- 3 Senior Instructors
- 2 Research Faculty

980 Students
- 483 Civil and Arch undergrads
- 215 Environmental undergrads
- 282 Civil Graduates

Civil was one of two CU Engineering Programs in 1893

Disciplines

Six Traditional Disciplines
- Building Systems Engineering
- Construction Engineering and Management
- Environmental Engineering
- Geotechnical Engineering and Geomechanics
- Structural Engineering and Structural Mechanics
- Hydrology, Water Resources, and Environmental Fluid Mechanics

Four Interdisciplinary Programs
- Civil Systems Engineering for Developing Communities
- Engineering Science
- Geoenvironmental Engineering

Ranked 22nd overall and 16th among public graduate programs (142 program in 2012)
Facilities

Large and small scale testing facilities
- Computing facilities
- Geotechnical and Structural Labs
- Water and Environmental Labs
- Building Systems Labs

CEAE Strengths

Faculty Excellence
- 12 new faculty since 2005
- Five NSF CAREER awardees
- Two NAE members
- Wide range of faculty awards

Faculty Diversity
- 7 women on faculty (4 in 2005)
- 5 faculty from underrepresented population (2 in 2005)
CEAE Strengths

Research Excellence

- $8.7 million in 82 grants in FY10
  - tripling the amount of grants ($2.9 million) and nearly doubling the number of grants (44) in 2005
- 7 NSF Graduate Fellowship awards
- Strong undergraduate participation in research
  - UROP
  - SMART
  - Earn-Learn

Student Growth

- 27% increase in student credit hours taught between 2005 and 2010
- 40% increase in graduate student enrollment (202 in 2005 and 282 in 2010)

Improved Facilities

- Environmental Engineering Labs
- Centrifuge Lab
- Bechtel Computing Lab
- Senior Design Classrooms
CEAE Challenges

Limitations on Faculty Growth

- No increase in tenure track faculty in 6 years
- Limited state funding for senior instructors

Lack of Staff Resources

- Flat budget for staff
- EVEN program has limited staff

Unstable Undergraduate Enrollments

<table>
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<tr>
<th>Year</th>
<th>AREN</th>
<th>CVEN</th>
<th>Total</th>
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<td>2005</td>
<td>221</td>
<td>214</td>
<td>435</td>
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<td>2006</td>
<td>257</td>
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<td>2007</td>
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<tr>
<td>2011</td>
<td>185</td>
<td>298</td>
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AREN Freshman enrollment has decrease drastically
All-time high of 55 in 2006 to 26 in 2011
CEAE Challenges

Facility Age and Utilization

- Funds required for Environmental lab move
- Structures lab is underutilized
- Larson building energy labs in need of upgrades