2011 EBI Senior Exit Survey

Slight change in Select 6

UT-Austin, Northwestern, U of Southern California, Carnegie Mellon U, UC-San Diego, +Columbia, -Auburn

UW CBE returns: 76/83 (Dec. and May)

Results posted to assessment.che.wisc.edu site

Peer comparisons (Q15-88) Select 6, Carnegie, all

UW longitudinal comparisons (ABET/EBI factors)

Continuing Concerns:

Physics – low vs. Chemistry, Math; CoE ongoing issue ABET a-k grid

Advising – chart shows decline reversing

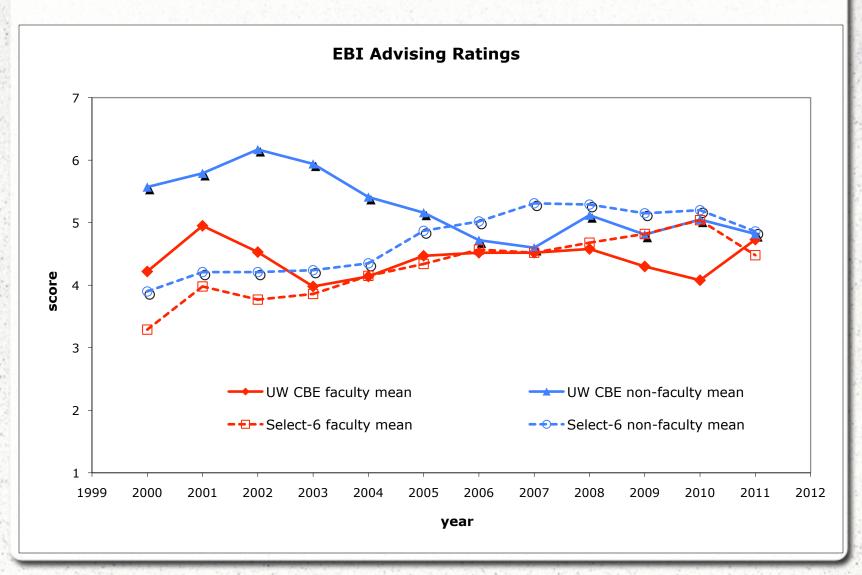
Teamwork – slight recovery, still below peers

Watch from last year:

concern with quality of education – staying up societal impact (down to 4.8 in 2010, back to xx now)

| ABET Outcome | 99 | Survey Question hat degree did your engineering education enhance your ability | 09-10 | 99 - '10 average | 2010-11 | change from average | change from last year |
|---|----|--|-------|---------------------|---------|---------------------------|-----------------------------|
| | 47 | apply your knowledge of mathematics | 5.85 | 6.17 | 6.21 | 0.04 | 0.36 |
| A) an ability to apply knowledge of mathematics, science, and engineering | 48 | apply your knowledge of science | 5.69 | 6.05 | 6.09 | 0.04 | 0.40 |
| | 49 | apply your knowledge of engineering | 6.12 | 6.03 | 6.30 | 0.27 | 0.18 |
| | 50 | design experiments | 5 | 5.32 | 5.55 | 0.23 | 0.55 |
| B) an ability to design and conduct experiments, as well as to analyze and interpret data | 51 | conduct experiments | 5.77 | 5.84 | 5.84 | 0.00 | 0.07 |
| | 52 | analyze and interpret data | 6.28 | 6.23 | 6.29 | 0.06 | 0.01 |
| C) an ability to design a system, component, or process to meet desired needs | 53 | design a system, component, or process to meet desired needs | 5.38 | 5.55 | 5.72 | 0.17 | 0.34 |
| D) an ability to function on multi-disciplinary teams | 40 | satisfaction with characteristics of your fellow students ability to work in teams | 5.35 | 5.63 | 5.66 | 0.03 | 0.31 |
| b) an ability to function on multi-disciplinary teams | 54 | Function in multidisciplinary teams | 5.46 | 5.36 | 5.29 | -0.07 | -0.17 |
| | 57 | solve engineering problems | 6.12 | 6.15 | 5.96 | -0.19 | -0.16 |
| E) an ability to identify, formulate, and solve engineering problems | 56 | Identify engineering problems | 5.73 | 5.82 | 5.45 | -0.37 | -0.28 |
| | 55 | formulate engineering problems | 5.46 | 5.60 | 5.70 | 0.10 | 0.24 |
| F) an understanding of professional and ethical responsibility | 58 | understand ethical responsibility | 5 | 4.67 | 4.74 | 0.07 | -0.26 |
| | 60 | communicate using oral progress reports | 5.12 | 5.04 | 5.01 | -0.03 | -0.11 |
| G) an ability to communicate effectively | 61 | communicate using written progress reports | 5.69 | 5.79 | 5.80 | 0.01 | 0.11 |
| | 70 | use text materials to support project design | 5.17 | 5.43 | 5.57 | 0.14 | 0.40 |
| H) the broad education necessary to understand the impact of engineering solutions in a global and societal context | 71 | understand the impact of engineering solutions in a global/societal context | 4.81 | 4.62 | 4.89 | 0.27 | 0.08 |
| I) a recognition of the need for, and an ability to engage in life- long learning | 62 | recognize need to engage in life long learning | 5.85 | 5.59 | 5.87 | 0.28 | 0.02 |
| J) a knowledge of contemporary issues | 63 | understand contemporary issues | 5.08 | 5.02 | 5.03 | 0.01 | -0.05 |
| K) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice. | 64 | use modern engineering tools | 5.46 | 5.41 | 5.59 | 0.18 | 0.13 |
| | | average | 5.52 | 5.57 | 5.63 | 0.06 | 0.11 |

Advising



Highest and Lowest Scores

15. Instruction and Faculty in your Engineering Major Quality of: Teaching



| | N | Mean | Std Dev | | | | | |
|------------------|------|------|---------|------|------|------------|---|----------|
| Your Institution | 76 | 5.01 | 1.09 | | | | | |
| | N | Mean | Std Dev | Min | Max | Difference | | Rank |
| Select 6 | 224 | 4.75 | 1.21 | 3.76 | 5.01 | 0.26 | ŵ | 1 of 7 |
| Carnegie Class | 747 | 4.88 | 1.22 | 3.76 | 6.25 | 0.13 | ŵ | 8 of 27 |
| All Institutions | 1075 | 4.94 | 1.22 | 3.76 | 6.25 | 0.07 | ŵ | 13 of 41 |

Availability of courses in major also high rating

63. Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Understand contemporary issues



| | N | Mean | Std Dev | | | | | |
|------------------|------|------|---------|------|------|------------|---|----------|
| Your Institution | 76 | 5.03 | 1.51 | | | | | |
| | N | Mean | Std Dev | Min | Max | Difference | | Rank |
| Select 6 | 246 | 5.13 | 1.31 | 4.52 | 5.59 | -0.10 | 1 | 4 of 7 |
| Carnegie Class | 737 | 5.19 | 1.33 | 4.49 | 6 | -0.16 | 1 | 20 of 27 |
| All Institutions | 1055 | 5.24 | 1.31 | 4.49 | 6 | -0.21 | • | 32 of 41 |

71. To what degree did your engineering education enhance your ability to understand the impact of engineering solutions in: A global/societal context

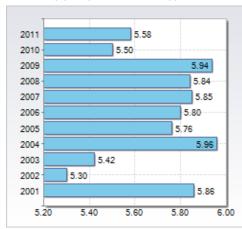


| | N | Mean | Std Dev | | | | | |
|------------------|------|------|---------|------|------|------------|---|----------|
| Your Institution | 75 | 4.89 | 1.45 | | | | | |
| | N | Mean | Std Dev | Min | Max | Difference | | Rank |
| Select 6 | 248 | 5.08 | 1.36 | 4.43 | 5.41 | -0.19 | • | 4 of 7 |
| Carnegie Class | 741 | 5.12 | 1.4 | 4.37 | 6.5 | -0.23 | 1 | 18 of 27 |
| All Institutions | 1061 | 5.16 | 1.38 | 4.37 | 6.5 | -0.27 | • | 31 of 41 |

Course Availability

Q032. Satisfaction with: Average size of major courses

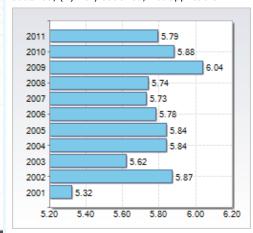
Scale: (1) Very dissatisfied, (2) Moderately dissatisfied, (3) Slightly dissatisfied, (4) Neutral, (5) Slightly satisfied, (6) Moderately satisfied, (7) Very satisfied, Not applicable



| | N | Mean | Std Dev | Difference |
|------|------|------------|---------|------------|
| 2011 | 76 | 5.58 | 1.16 | 0.00 |
| 2010 | 26 | 5.50 | 1.07 | 0.08 |
| | Mean | Difference | | |
| 2009 | 5.94 | -0.36 | | |
| 2008 | 5.84 | -0.26 | | |
| 2007 | 5.85 | -0.27 | | |
| 2006 | 5.80 | -0.22 | | |
| 2005 | 5.76 | -0.18 | | |
| 2004 | 5.96 | -0.38 | | |
| 2003 | 5.42 | 0.16 | | |
| 2002 | 5.30 | 0.28 | | |
| 2001 | 5.86 | -0.28 | | |
| | | | | |

Q033. Satisfaction with: Availability of courses in major

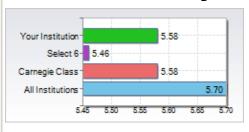
Scale: (1) Very dissatisfied, (2) Moderately dissatisfied, (3) Slightly dissatisfied, (4) Neutral, (5) Slightly satisfied, (6) Moderately satisfied, (7) Very satisfied, Not applicable



| | N | Mean | Std Dev | Difference |
|------|------|------------|---------|------------|
| 2011 | 75 | 5.79 | 1.41 | 0.00 |
| 2010 | 26 | 5.88 | 1.03 | -0.09 |
| | Mean | Difference | | |
| 2009 | 6.04 | -0.25 | | |
| 2008 | 5.74 | 0.05 | | |
| 2007 | 5.73 | 0.06 | | |
| 2006 | 5.78 | 0.01 | | |
| 2005 | 5.84 | -0.05 | | |
| 2004 | 5.84 | -0.05 | | |
| 2003 | 5.62 | 0.17 | | |
| 2002 | 5.87 | -0.08 | | |
| 2001 | 5.32 | 0.47 | | |

Course Availability

32. Satisfaction with: Average size of major courses



| | N | Mean | Std Dev | | | | | |
|------------------|------|------|---------|------|------|------------|---|----------|
| Your Institution | 76 | 5.58 | 1.15 | | | | | |
| | N | Mean | Std Dev | Min | Max | Difference | | Rank |
| Select 6 | 254 | 5.46 | 1.36 | 5.15 | 6.21 | 0.12 | ŵ | 4 of 7 |
| Carnegie Class | 764 | 5.58 | 1.4 | 4.64 | 7 | 0.00 | | 18 of 27 |
| All Institutions | 1092 | 5.7 | 1.33 | 4.64 | 7 | -0.12 | 1 | 27 of 41 |

33. Satisfaction with: Availability of courses in major

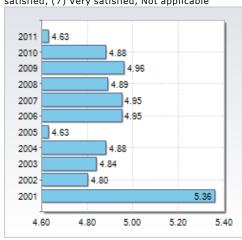


| | N | Mean | Std Dev | | | | | |
|------------------|------|------|---------|------|------|------------|---|----------|
| Your Institution | 75 | 5.79 | 1.4 | | | | | |
| | N | Mean | Std Dev | Min | Max | Difference | | Rank |
| Select 6 | 254 | 4.99 | 1.61 | 4.52 | 5.82 | 0.80 | ŵ | 2 of 7 |
| Carnegie Class | 765 | 5.21 | 1.61 | 3.94 | 6.67 | 0.58 | ŵ | 8 of 27 |
| All Institutions | 1091 | 5.21 | 1.6 | 3.94 | 6.67 | 0.58 | • | 10 of 41 |

UW CBE Longitudinal Trends

Q022. Satisfaction with: Grades in major courses accurately reflecting students' level of performance

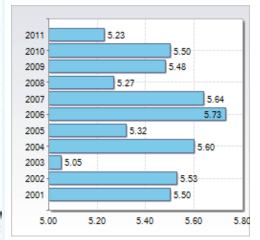
Scale: (1) Very dissatisfied, (2) Moderately dissatisfied, (3) Slightly dissatisfied, (4) Neutral, (5) Slightly satisfied, (6) Moderately satisfied, (7) Very satisfied, Not applicable



| | N | Mean | Std Dev | Difference |
|------|------|------------|---------|------------|
| 2011 | 76 | 4.63 | 1.57 | 0.00 |
| 2010 | 26 | 4.88 | 1.42 | -0.25 |
| | Mean | Difference | | |
| 2009 | 4.96 | -0.33 | | |
| 2008 | 4.89 | -0.26 | | |
| 2007 | 4.95 | -0.32 | | |
| 2006 | 4.95 | -0.32 | | |
| 2005 | 4.63 | 0.00 | | |
| 2004 | 4.88 | -0.25 | | |
| 2003 | 4.84 | -0.21 | | |
| 2002 | 4.80 | -0.17 | | |
| 2001 | 5.36 | -0.73 | | |
| | | | | - |

Q023. Satisfaction with: Accessibility of major course instructors outside of class

Scale: (1) Very dissatisfied, (2) Moderately dissatisfied, (3) Slightly dissatisfied, (4) Neutral, (5) Slightly satisfied, (6) Moderately satisfied, (7) Very satisfied, Not applicable



| | N | Mean | Std Dev | Difference |
|------|------|------------|---------|------------|
| 2011 | 75 | 5.23 | 1.23 | 0.00 |
| 2010 | 26 | 5.50 | 0.99 | -0.27 |
| | Mean | Difference | | |
| 2009 | 5.48 | -0.25 | _ | |
| 2008 | 5.27 | -0.04 | | |
| 2007 | 5.64 | -0.41 | | |
| 2006 | 5.73 | -0.50 | | |
| 2005 | 5.32 | -0.09 | | |
| 2004 | 5.60 | -0.37 | | |
| 2003 | 5.05 | 0.18 | | |
| 2002 | 5.53 | -0.30 | | |
| 2001 | 5.50 | -0.27 | | |

Watched Scores

- 52 analyze and interpret data : above average, high absolute
- 40 satisfaction with fellow students on teams rising
- Lowest absolute political issues, work in courses
- Comparisons with Select-6 peer group work in courses, ethics, advising by faculty improving, designing experiments
- Decreasing longitudinal comparisons size of major courses, fellow student quality, companies recruiting on campus rising
- Action needs
 - Advising improvements continue
 - Teamwork
 - Communications Oral and Written