2010 EBI Senior Exit Survey

Slight change in Select 6

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

UW CBE returns: 50/59 (14 Dec., 36 May), 26 reported

Continuing Concerns:

Physics – low (3.4) vs. Chemistry (5.4), Math (4.6)
– CoE ongoing issue

ABET a-k grid

Advising – decrease again - chart

Teamwork – slight recovery, still below peers

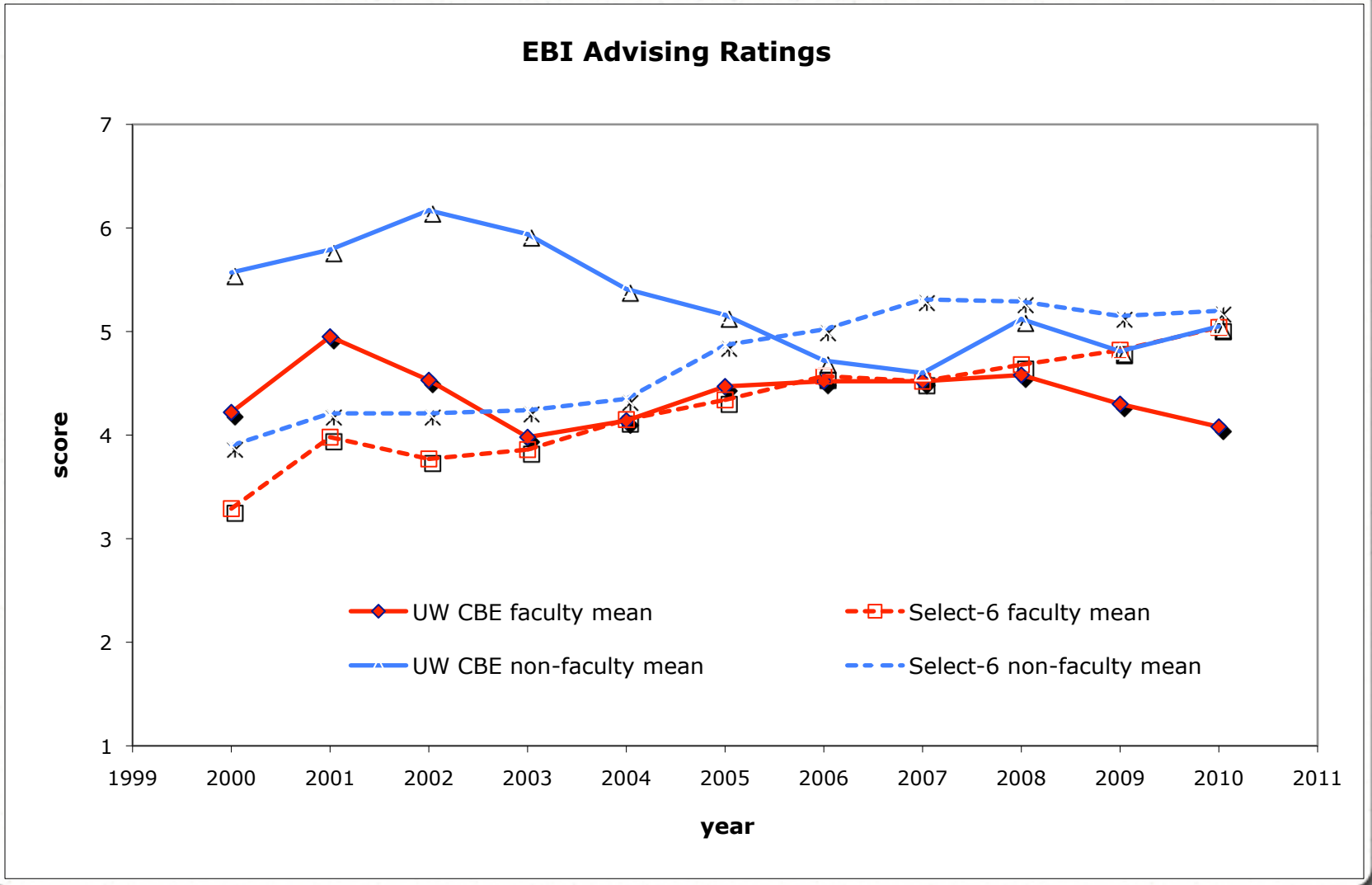
Watch from last year:

concern with quality of education – staying up

societal impact (up to 5.2 in 2009, back to 4.8 now)

ABET Outcome		EBI Survey Question *To what degree did your engineering education enhance your ability to*:	08-09	99 - '09 average	2009-10	change from average	change from last year
A) an ability to apply knowledge of mathematics, science, and engineering	45	apply your knowledge of mathematics	6.00	6.21	5.85	-0.36	-0.15
	46	apply your knowledge of science	6.04	6.10	5.69	-0.41	-0.35
	47	apply your knowledge of engineering	6.21	6.02	6.12	0.10	-0.09
B) an ability to design and conduct experiments, as well as to analyze and interpret data	48	design experiments	5.29	5.35	5.00	-0.35	-0.29
	49	conduct experiments	5.92	5.85	5.77	-0.08	-0.15
	50	analyze and interpret data	6.19	6.22	6.28	0.06	0.09
C) an ability to design a system, component, or process to meet desired needs	51	design a system, component, or process to meet desired needs	5.65	5.57	5.38	-0.19	-0.27
D) an ability to function on multi-disciplinary teams	38	satisfaction with characteristics of your fellow students ability to work in teams	5.31	5.66	5.35	-0.31	0.04
	52	Function in multidisciplinary teams	5.48	5.35	5.46	0.11	-0.02
E) an ability to identify, formulate, and solve engineering problems	55	solve engineering problems	6.27	6.15	6.12	-0.03	-0.15
	53	Identify engineering problems	5.69	5.83	5.73	-0.10	0.04
	54	formulate engineering problems	5.56	5.62	5.46	-0.16	-0.10
F) an understanding of professional and ethical responsibility	56	understand ethical responsibility	4.77	4.64	5.00	0.36	0.23
G) an ability to communicate effectively	58	communicate using oral progress reports	4.98	5.03	5.12	0.09	0.14
	59	communicate using written progress reports	5.98	5.80	5.69	-0.11	-0.29
	68	use text materials to support project design	5.62	5.46	5.17	-0.29	-0.45
H) the broad education necessary to understand the impact of engineering solutions in a global and societal context	69	understand the impact of engineering solutions in a global/societal context	5.19	4.60	4.81	0.21	-0.38
I) a recognition of the need for, and an ability to engage in life-long learning	60	recognize need to engage in life long learning	5.67	5.56	5.85	0.29	0.18
J) a knowledge of contemporary issues	61	understand contemporary issues	5.23	5.01	5.08	0.07	-0.15
K) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.	62	use modern engineering tools	5.74	5.40	5.46	0.06	-0.28

Advising


EBI Advising Ratings
score
7
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year
UW CBE faculty mean
Select-6 faculty mean
UW CBE non-faculty mean
Select-6 non-faculty mean

University of Wisconsin-Madison

Highest and Lowest Mean Questions for Engineering Major: Chemical/Molecular

This set of questions are the highest mean questions for University of Wisconsin-Madison	# Responses	Mean	Std Dev
Q50. Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Analyze and interpret data	25	6.28	0.78
Q47. Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Apply knowledge of engineering	26	6.12	0.89
Q55. Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Solve engineering problems	26	6.12	0.80
Q31. Satisfaction with: Availability of courses in major	26	5.88	1.01
Q45. Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Apply knowledge of mathematics	26	5.85	1.03
Q60. Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Recognize need to engage in lifelong learning	26	5.85	0.91
Q65. Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Built on skills from previous course work	26	5.81	0.88
Q64. Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Built on knowledge from previous course work	26	5.77	0.93
Q82. Course Comparison - Quality of teaching in your Engineering courses compare to the quality of teaching in Non-Engineering courses on this campus	26	5.77	1.19
Q49. Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Conduct experiments	26	5.77	0.75
Q53. Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Identify engineering problems	26	5.73	0.81
Q46. Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Apply knowledge of science	26	5.69	0.91
Q59. Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Communicate using written progress reports	26	5.69	0.87
Q36. Advising/Computing - Advising/Computing - Satisfaction with: Quality of computing resources	26	5.65	1.00
Q86. How inclined are you to recommend your: How inclined are you to recommend your Undergraduate Engineering School to a close friend	26	5.62	1.47

This set of questions are the lowest mean questions for University of Wisconsin-Madison	# Responses	Mean	Std Dev
Q75. System Design - To what degree did your system design experience address the following: Addressed Political issues	25	3.32	1.26
Q18. Satisfaction with quality of teaching in required course work: (if course not taken on this campus, select "not applicable") Physics	24	3.42	1.73
Q23. Satisfaction with: Amount of work required of in major courses	26	3.85	1.63
Q26. Satisfaction with: Opportunities for interaction with practitioners	24	3.88	1.20
Q14. Instruction and Faculty in your Engineering Major	26	4.00	1.04
Q34. Advising/Computing - Advising/Computing - Satisfaction with: Academic advising by faculty	26	4.08	1.62
Q74. System Design - To what degree did your system design experience address the following: Addressed Social issues	26	4.15	1.06
Q42. Career Services - Career Services - Satisfaction with: Access to school's alumni to cultivate career opportunities	18	4.17	0.90
Q67. Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Pilot test a component prior to implementation	23	4.22	1.44
Q16. Satisfaction with quality of teaching in required course work: (if course not taken on this campus, select "not applicable") Calculus	23	4.30	1.94
Q33. Satisfaction with: Amount of work in relationship to what was learned	26	4.54	1.45
Q25. Satisfaction with: Opportunities for practical experiences within Undergraduate curriculum	26	4.58	1.34
Q15. Instruction and Faculty in your Engineering Major	26	4.62	1.18
Q76. System Design - To what degree did your system design experience address the following: Addressed Ethical issues	25	4.64	1.13
Q24. Satisfaction with: Engineering curriculum instructors presentation of technology issues	26	4.65	1.04

University of Wisconsin-Madison

Question Competitive Analysis: Select 6 Comparison for Engineering Major: Chemical/Molecular

Greatest Positive Difference Between Your Data and Your Select 6		UW-Madison	Select 6	Difference
Q82.	Course Comparison - Quality of teaching in your Engineering courses compare to the quality of teaching in Non-Engineering courses on this campus	5.77	5.14	0.63
Q83.	The Bottom Line - Overall Satisfaction - Extent that the Undergraduate Engineering program experience fulfill expectations	5.54	5.03	0.51
Q84.	Comparing the expense to the quality of education, rate the value of the investment made in Undergraduate Engineering program	5.19	4.75	0.44
Q31.	Satisfaction with: Availability of courses in major	5.88	5.46	0.42
Q36.	Advising/Computing - Advising/Computing - Satisfaction with: Quality of computing resources	5.65	5.27	0.38
Q41.	Career Services - Career Services - Satisfaction with: Geographic distribution of companies recruiting on campus	4.86	4.48	0.38
Q40.	Career Services - Career Services - Satisfaction with: Assistance in preparation for permanent job search	5.30	4.99	0.31
Q29.	Satisfaction with: Leadership opportunities in Engineering program's extracurricular activities	5.35	5.05	0.30
Q28.	Satisfaction with: Value of Engineering program student organization activities	5.27	4.98	0.29
Q86.	How inclined are you to recommend your: How inclined are you to recommend your Undergraduate Engineering School to a close friend	5.62	5.40	0.22
Q60.	Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Recognize need to engage in lifelong learning	5.85	5.63	0.22
Q50.	Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Analyze and interpret data	6.28	6.10	0.18
Q55.	Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Solve engineering problems	6.12	6.01	0.11
Q85.	How inclined are you to recommend your: How inclined are you to recommend your Undergraduate Engineering Major to a close friend	5.20	5.10	0.10
Q65.	Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Built on skills from previous course work	5.81	5.79	0.02

Greatest Negative Difference Between Your Data and Your Select 6		UW-Madison	Select 6	Difference
Q34.	Advising/Computing - Advising/Computing - Satisfaction with: Academic advising by faculty	4.08	5.04	-0.96
Q23.	Satisfaction with: Amount of work required of in major courses	3.85	4.76	-0.91
Q18.	Satisfaction with quality of teaching in required course work: (if course not taken on this campus, select "not applicable") Physics	3.42	4.28	-0.86
Q16.	Satisfaction with quality of teaching in required course work: (if course not taken on this campus, select "not applicable") Calculus	4.30	5.13	-0.83
Q75.	System Design - To what degree did your system design experience address the following: Addressed Political issues	3.32	4.01	-0.69
Q56.	Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Understand ethical responsibilities	5.00	5.61	-0.61
Q48.	Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Design experiments	5.00	5.60	-0.60
Q76.	System Design - To what degree did your system design experience address the following: Addressed Ethical issues	4.64	5.24	-0.60
Q58.	Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Communicate using oral progress reports	5.12	5.68	-0.56
Q69.	To what degree did your engineering education enhance your ability to understand the impact of engineering solutions in: A global/societal context	4.81	5.34	-0.53
Q26.	Satisfaction with: Opportunities for interaction with practitioners	3.88	4.39	-0.51
Q68.	Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Use text materials to support project design	5.17	5.66	-0.49
Q19.	Satisfaction with quality of teaching in required course work: (if course not taken on this campus, select "not applicable") Chemistry	5.19	5.68	-0.49
Q78.	System Design - To what degree did your system design experience address the following: Addressed Manufacturability issues	5.04	5.52	-0.48
Q77.	System Design - To what degree did your system design experience address the following: Addressed Health and Safety issues	5.27	5.74	-0.47

NOTE: If a section is blank, this means that there were no questions that met those conditions.

University of Wisconsin-Madison

Question Competitive Analysis: Longitudinal Comparison for Engineering Major: Chemical/Molecular

Greatest Positive Difference Between This Year's Question Means and Last Year's Question Means		2010	2009	Difference
Q73.	System Design - To what degree did your system design experience address the following: Addressed Environmental issues	5.50	4.58	0.92
Q76.	System Design - To what degree did your system design experience address the following: Addressed Ethical issues	4.64	3.96	0.68
Q28.	Satisfaction with: Value of Engineering program student organization activities	5.27	4.73	0.54
Q17.	Satisfaction with quality of teaching in required course work: (if course not taken on this campus, select "not applicable") Differential Equations	4.85	4.38	0.47
Q77.	System Design - To what degree did your system design experience address the following: Addressed Health and Safety issues	5.27	4.83	0.44
Q74.	System Design - To what degree did your system design experience address the following: Addressed Social issues	4.15	3.75	0.40
Q82.	Course Comparison - Quality of teaching in your Engineering courses compare to the quality of teaching in Non-Engineering courses on this campus	5.77	5.42	0.35
Q29.	Satisfaction with: Leadership opportunities in Engineering program's extracurricular activities	5.35	5.03	0.32
Q83.	The Bottom Line - Overall Satisfaction - Extent that the Undergraduate Engineering program experience fulfill expectations	5.54	5.25	0.29
Q15.	Instruction and Faculty in your Engineering Major Quality of: Student/faculty interaction	4.62	4.34	0.28
Q35.	Advising/Computing - Advising/Computing - Satisfaction with: Academic advising by non-faculty	5.05	4.81	0.24
Q56.	Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Understand ethical responsibilities	5.00	4.77	0.23
Q60.	Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Recognize need to engage in lifelong learning	5.85	5.67	0.18
Q66.	Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Incorporated engineering standards	5.23	5.06	0.17
Q14.	Instruction and Faculty in your Engineering Major Quality of: Feedback on assignments (other than grades)	4.00	3.85	0.15

Greatest Negative Difference Between This Year's Question Means and Last Year's Question Means		2010	2009	Difference
Q43.	Career Services - Career Services - Satisfaction with: Number of companies recruiting on campus	4.71	5.57	-0.86
Q37.	Classmates - Satisfaction with characteristics of your fellow students': Academic quality	5.23	5.88	-0.65
Q18.	Satisfaction with quality of teaching in required course work: (if course not taken on this campus, select "not applicable") Physics	3.42	4.00	-0.58
Q16.	Satisfaction with quality of teaching in required course work: (if course not taken on this campus, select "not applicable") Calculus	4.30	4.86	-0.56
Q19.	Satisfaction with quality of teaching in required course work: (if course not taken on this campus, select "not applicable") Chemistry	5.19	5.72	-0.53
Q80.	Laboratory Facilities</b - Laboratory Facilities - Degree that laboratory facilities: Established an atmosphere conducive to learning	5.08	5.56	-0.48
Q81.	Laboratory Facilities</b - Laboratory Facilities - Degree that laboratory facilities: Fostered student/faculty interaction	5.04	5.50	-0.46
Q68.	Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Use text materials to support project design	5.17	5.62	-0.45
Q30.	Satisfaction with: Average size of major courses	5.50	5.94	-0.44
Q69.	To what degree did your engineering education enhance your ability to understand the impact of engineering solutions in: A global/societal context	4.81	5.19	-0.38
Q84.	Comparing the expense to the quality of education, rate the value of the investment made in Undergraduate Engineering program	5.19	5.56	-0.37
Q36.	Advising/Computing - Advising/Computing - Satisfaction with: Quality of computing resources	5.65	6.00	-0.35
Q46.	Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Apply knowledge of science	5.69	6.04	-0.35
Q48.	Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Design experiments	5.00	5.29	-0.29
Q59.	Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Communicate using written progress reports	5.69	5.98	-0.29

NOTE: If a section is blank, this means that there were no questions that met those conditions.

Watched Scores

- 50 - analyze and interpret data : above average, high absolute
- 38 - satisfaction with fellow students on teams – still low
- Lowest absolute – political issues, work in courses, satisfaction with instruction and faculty, advising by faculty
- Comparisons with Select-6 peer group – advising by faculty, work in courses, ethics, designing experiments
- Decreasing longitudinal comparisons – size of major courses, fellow student quality, companies recruiting on campus, laboratories
- Action needs
  - Advising
  - Teamwork
  - Communications