

# University of Wisconsin-Madison

## Factor and Question Analysis: Select 6 Comparison for Engineering Major: Chemical

	Your Data			Your Select 6 Data										Comparison to Select 6		
				There are 6 institutions in this comparison group.												
	N	Mean	Std Dev	Sel 1	Sel 2	Sel 3	Sel 4	Sel 5	Sel 6	Range of Means		Wt Mean	Std Dev	Difference in Means	Arrow	Rank Among 7
										Min	Max					
Q1. Quality of Instruction and Faculty in Major Course Work: Teaching	67	5.01	1.02	4.77	4.24	4.88	5.50	4.76	4.46	4.24	5.50	4.67	1.16	0.34	▲	2
Q2. Quality of Instruction and Faculty in Major Course Work: Feedback on assignments (other than grades)	66	3.79	1.05	4.09	3.31	4.24	5.17	4.40	3.62	3.31	5.17	4.10	1.20	-0.31	▼	5
Q3. Quality of Instruction and Faculty in Major Course Work: Student/faculty interaction	67	4.46	1.08	3.82	4.00	4.71	5.17	4.57	5.38	3.82	5.38	4.45	1.44	0.01	▲	5
Q8. Satisfaction with: Grades in major courses accurately reflecting students' level of performance	68	4.63	1.64	4.95	4.73	4.06	6.20	4.86	4.46	4.06	6.20	4.78	1.65	-0.15	▼	5
Q9. Satisfaction with: Accessibility of major course instructors outside of class	66	5.32	1.13	5.23	4.78	5.81	6.60	5.34	5.77	4.78	6.60	5.32	1.33	0.00		5
Q10. Satisfaction with: Responsiveness to major course instructors to student concerns	65	5.40	1.18	4.86	4.41	5.24	6.20	5.28	5.17	4.41	6.20	5.07	1.36	0.33	▲	2
Q11. Satisfaction with: Amount of work required of in major courses	66	4.18	1.59	4.14	3.73	4.38	6.40	4.61	4.23	3.73	6.40	4.37	1.57	-0.19	▼	5
Q18. Satisfaction with: Average size of major courses	67	5.76	1.09	5.73	5.78	6.29	6.80	5.36	6.31	5.36	6.80	5.69	1.18	0.07	▲	5
Q19. Satisfaction with: Availability of courses in major	67	5.84	1.26	5.50	5.14	6.12	5.80	5.27	4.46	4.46	6.12	5.30	1.48	0.54	▲	2
Q12. Satisfaction with: Engineering curriculum instructors presentation of technology issues	66	4.77	1.35	4.32	4.89	4.59	6.40	4.94	3.92	3.92	6.40	4.80	1.35	-0.03	▼	4
Q13. Satisfaction with: Opportunities for practical experiences within Undergraduate curriculum	65	5.06	1.47	4.50	5.22	4.44	5.40	4.80	3.58	3.58	5.40	4.75	1.59	0.31	▲	3
Q14. Satisfaction with: Opportunities for interaction with practitioners	56	4.50	1.44	3.81	4.26	4.06	5.40	4.15	3.36	3.36	5.40	4.11	1.50	0.39	▲	2
Q21. Satisfaction with: Amount of work in relationship to what was learned	67	4.73	1.26	3.95	4.22	4.82	6.40	5.02	3.92	3.92	6.40	4.68	1.58	0.05	▲	4
Q15. Satisfaction with: Value derived from team experiences	67	5.34	1.32	4.76	5.81	4.47	5.40	5.66	4.46	4.46	5.81	5.38	1.40	-0.04	▼	4
Q16. Satisfaction with: Value of Engineering program student organization activities	55	5.05	1.53	3.80	4.49	4.07	5.50	5.14	5.00	3.80	5.50	4.75	1.47	0.30	▲	3
Q17. Satisfaction with: Leadership opportunities in Engineering program's extracurricular activities	52	5.23	1.44	3.94	4.54	4.64	5.20	4.94	5.45	3.94	5.45	4.76	1.43	0.47	▲	2

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## Factor and Question Analysis: Select 6 Comparison for Engineering Major: Chemical

		Your Data			Your Select 6 Data								Comparison to Select 6				
					There are 6 institutions in this comparison group.												
		N	Mean	Std Dev	Sel 1	Sel 2	Sel 3	Sel 4	Sel 5	Sel 6	Range of Means		Wt Mean	Std Dev	Difference in Means	Arrow	Rank Among 7
Min		Max															
Factor: Advising/Computing Resources		68	6.35	1.04	5.14	5.75	3.53	5.60	6.03	4.77	3.53	6.03	5.54	1.61	0.81	▲	1
Q24.	Advising/Computing - Satisfaction with: Quality of computing resources	68	6.35	0.84	5.14	5.75	3.53	5.60	6.03	4.77	3.53	6.03	5.54	1.61	0.81	▲	1
Q25.	Advising/Computing - Satisfaction with: Availability of computers in the Engineering School	68	6.04	1.04	5.36	6.03	4.76	5.60	5.46	5.62	4.76	6.03	5.51	1.55	0.53	▲	1
Q26.	Advising/Computing - Satisfaction with: Remote access to Engineering School's computer network	54	5.69	1.40	3.67	4.79	4.35	6.00	4.83	4.00	3.67	6.00	4.62	1.96	1.07	▲	2
Q27.	Advising/Computing - Satisfaction with: Training to utilize Engineering School's computing resources	62	4.71	1.42	4.36	4.44	3.94	5.00	4.71	3.92	3.92	5.00	4.49	1.60	0.22	▲	2
Factor: Fellow Students		68	5.94	1.03	5.09	6.11	5.35	6.80	5.90	5.85	5.09	6.80	5.81	1.04	0.13	▲	3
Q28.	Satisfaction with characteristics of your fellow students': Academic quality	68	5.94	1.03	5.09	6.11	5.35	6.80	5.90	5.85	5.09	6.80	5.81	1.04	0.13	▲	3
Q29.	Satisfaction with characteristics of your fellow students': Ability to work in teams	68	5.62	1.17	5.14	5.83	4.94	6.40	5.69	4.69	4.69	6.40	5.53	1.33	0.09	▲	4
Q30.	Satisfaction with characteristics of your fellow students': Level of camaraderie	68	5.68	1.24	4.91	5.44	5.35	6.80	5.62	6.15	4.91	6.80	5.55	1.50	0.13	▲	3
Factor: Career Services and Job Preparation		60	5.68	1.53	4.76	4.64	3.64	6.20	5.29	4.00	3.64	6.20	4.89	1.79	0.79	▲	2
Q31.	Career Services - Satisfaction with: Assistance in preparation for permanent job search	60	5.68	1.53	4.76	4.64	3.64	6.20	5.29	4.00	3.64	6.20	4.89	1.79	0.79	▲	2
Q32.	Career Services - Satisfaction with: Geographic distribution of companies recruiting on campus	61	5.10	1.77	4.53	4.71	2.93	6.60	5.00	3.85	2.93	6.60	4.66	1.69	0.44	▲	2
Q33.	Career Services - Satisfaction with: Access to school's alumni to cultivate career opportunities	53	4.00	1.45	4.18	4.63	3.00	6.80	4.23	4.46	3.00	6.80	4.30	1.70	-0.30	▼	6
Q34.	Career Services - Satisfaction with: Number of companies recruiting on campus	64	5.69	1.41	4.89	5.03	3.00	6.80	5.58	3.62	3.00	6.80	5.05	1.72	0.64	▲	2
Q35.	Career Services - Satisfaction with: Quality of companies recruiting on campus	64	5.53	1.65	5.44	5.70	4.29	6.80	5.88	4.23	4.23	6.80	5.56	1.47	-0.03	▼	4

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## Factor and Question Analysis: Select 6 Comparison for Engineering Major: Chemical

	Your Data			Your Select 6 Data										Comparison to Select 6		
				There are 6 institutions in this comparison group.												
	N	Mean	Std Dev	Sel 1	Sel 2	Sel 3	Sel 4	Sel 5	Sel 6	Range of Means		Wt Mean	Std Dev	Difference in Means	Arrow	Rank Among 7
										Min	Max					
<b>Factor 1: Skill Development - Design experiments</b>	68	5.59	1.04	5.05	5.46	5.06	5.60	5.62	4.54	4.54	5.62	5.39	1.27	0.20	▲	3
Q36. Skill Development - Degree that engineering education enhanced ability to: Design experiments	68	5.59	1.04	5.05	5.46	5.06	5.60	5.62	4.54	4.54	5.62	5.39	1.27	0.20	▲	3
Q37. Skill Development - Degree that engineering education enhanced ability to: Conduct experiments	68	6.06	0.83	5.18	5.89	5.47	6.20	5.84	5.23	5.18	6.20	5.70	1.08	0.36	▲	2
Q38. Skill Development - Degree that engineering education enhanced ability to: Analyze and interpret data	68	6.29	0.69	5.82	6.17	6.00	5.80	6.18	5.62	5.62	6.18	6.07	0.94	0.22	▲	1
Q39. Skill Development - Degree that engineering education enhanced ability to: Design a system, component, or process to meet desired needs	68	5.76	1.13	5.59	5.51	5.65	6.40	5.70	4.50	4.50	6.40	5.59	1.18	0.17	▲	2
Q40. Skill Development - Degree that engineering education enhanced ability to: Function on multidisciplinary teams	66	5.42	1.24	4.86	5.46	5.35	6.00	5.52	4.73	4.73	6.00	5.38	1.47	0.04	▲	4
<b>Factor 2: Skill Development - Understanding solutions</b>	68	4.52	1.66	4.10	4.91	5.24	5.60	5.24	5.38	4.10	5.60	5.06	1.54	-0.63	▼	6
Q42. Skill Development - Degree that engineering education enhanced ability to: Understand ethical responsibilities	68	4.43	1.60	4.10	4.91	5.24	5.60	5.24	5.38	4.10	5.60	5.06	1.54	-0.63	▼	6
Q43. Skill Development - Degree that engineering education enhanced ability to: Understand the impact of engineering solutions in a global/societal context	67	4.61	1.67	3.82	5.21	5.13	5.40	5.03	5.38	3.82	5.40	4.96	1.54	-0.35	▼	6
<b>Factor 3: Skill Development - Use of modern engineering tools</b>	68	5.54	1.19	5.00	5.54	5.29	5.60	5.59	4.25	4.25	5.60	5.39	1.30	0.15	▲	3
Q44. Skill Development - Degree that engineering education enhanced ability to: Use modern engineering tools	68	5.54	1.19	5.00	5.54	5.29	5.60	5.59	4.25	4.25	5.60	5.39	1.30	0.15	▲	3
Q45. Skill Development - Degree that engineering education enhanced ability to: Communicate using oral progress reports	68	4.99	1.20	5.27	5.80	5.59	5.60	5.60	4.08	4.08	5.80	5.49	1.26	-0.50	▼	6
Q46. Skill Development - Degree that engineering education enhanced ability to: Communicate using written progress reports	67	5.97	0.90	5.86	5.94	5.24	5.60	5.99	4.46	4.46	5.99	5.77	1.11	0.20	▲	2
Q47. Skill Development - Degree that engineering education enhanced ability to: Pilot test a component prior to implementation	58	3.90	1.65	3.94	4.59	3.38	4.40	4.31	3.46	3.38	4.59	4.16	1.69	-0.26	▼	5
Q48. Skill Development - Degree that engineering education enhanced ability to: Use text materials to support project design	68	5.54	1.04	4.82	5.24	5.35	5.20	5.53	4.38	4.38	5.53	5.28	1.33	0.26	▲	1

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										Min	Max					
Q41. Skill Development - Degree that engineering education enhanced ability to: Solve engineering problems	68	6.25	0.76	5.73	6.09	5.88	6.40	5.96	5.15	5.15	6.40	5.90	1.10	0.35	A	2
Q50. Skill Development - Degree that engineering education enhanced ability to: Apply knowledge of mathematics	68	6.21	0.78	5.32	5.83	5.65	6.80	6.10	6.08	5.32	6.80	5.93	0.97	0.28	▲	2
Q51. Skill Development - Degree that engineering education enhanced ability to: Apply knowledge of science	68	6.10	0.96	5.64	5.83	6.12	6.80	6.19	6.00	5.64	6.80	6.05	0.94	0.05	▲	4
Q52. Skill Development - Degree that engineering education enhanced ability to: Apply knowledge of engineering	68	6.03	0.83	5.68	5.86	5.76	6.80	6.01	5.85	5.68	6.80	5.93	0.93	0.10	▲	2
Q53. Skill Development - Degree that engineering education enhanced ability to: Identify engineering problems	68	6.04	0.80	5.82	6.03	5.71	6.80	5.87	5.23	5.23	6.80	5.86	1.03	0.18	▲	2
Q54. Skill Development - Degree that engineering education enhanced ability to: Formulate engineering problems	68	5.74	0.86	5.50	5.66	5.41	6.40	5.46	4.54	4.54	6.40	5.46	1.31	0.28	▲	2
Q55. Skill Development - Degree that engineering education enhanced ability to: Understand contemporary issues	68	4.75	1.57	4.95	5.40	5.31	6.40	5.09	4.92	4.92	6.40	5.18	1.31	-0.43	▼	7
Q56. Major Design Experience - Degree that the major design experience: Built on knowledge from previous course work	67	5.58	1.02	4.86	5.66	5.44	5.80	5.91	5.23	4.86	5.91	5.64	1.24	-0.06	▼	4
Q57. Major Design Experience - Degree that the major design experience: Built on skills from previous course work	67	5.55	1.03	4.95	5.46	5.41	6.00	5.85	5.00	4.95	6.00	5.57	1.30	-0.02	▼	3
Q58. Major Design Experience - Degree that the major design experience: Incorporated engineering standards	66	5.14	1.24	4.52	5.26	4.76	4.80	5.61	5.00	4.52	5.61	5.27	1.33	-0.13	▼	3

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## Factor and Question Analysis: Select 6 Comparison for Engineering Major: Chemical

		Your Data			Your Select 6 Data										Comparison to Select 6		
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		N	Mean	Std Dev	Sel 1	Sel 2	Sel 3	Sel 4	Sel 5	Sel 6	Range of Means		Wt Mean	Std Dev	Difference in Means	Arrow	Rank Among 7
Min		Max															
Factor 16: Degree that the major design experience:																	
Q59.	Major Design Experience - Degree that the major design experience: Addressed Economic issues	67	5.66	1.07	5.14	5.54	5.59	5.20	5.61	4.92	4.92	5.61	5.48	1.36	0.18	▲	1
Q60.	Major Design Experience - Degree that the major design experience: Addressed Environmental issues	67	4.33	1.48	3.57	5.49	4.53	5.00	5.30	4.54	3.57	5.49	4.99	1.64	-0.66	▼	6
Q61.	Major Design Experience - Degree that the major design experience: Addressed Sustainability issues	66	4.53	1.38	3.90	5.23	4.29	5.40	4.97	4.08	3.90	5.40	4.78	1.62	-0.25	▼	4
Q62.	Major Design Experience - Degree that the major design experience: Addressed Manufacturability issues	66	4.65	1.42	3.95	4.76	4.59	4.80	5.11	4.67	3.95	5.11	4.82	1.58	-0.17	▼	5
Q63.	Major Design Experience - Degree that the major design experience: Addressed Ethical issues	67	4.16	1.51	3.05	4.50	4.47	5.20	5.08	4.31	3.05	5.20	4.63	1.65	-0.47	▼	6
Q64.	Major Design Experience - Degree that the major design experience: Addressed Health and Safety issues	67	4.33	1.50	3.81	5.63	4.35	5.20	5.50	4.17	3.81	5.63	5.12	1.58	-0.79	▼	5
Q65.	Major Design Experience - Degree that the major design experience: Addressed Social issues	67	3.61	1.48	3.00	4.37	3.94	4.80	4.61	3.45	3.00	4.80	4.24	1.70	-0.63	▼	5
Q66.	Major Design Experience - Degree that the major design experience: Addressed Political issues	67	3.03	1.41	2.70	4.14	3.44	4.60	3.76	3.09	2.70	4.60	3.67	1.87	-0.64	▼	6
Factor 16: Laboratory Facilities																	
Q67.	Laboratory Facilities - Degree that laboratory facilities: Established an atmosphere conducive to learning	68	5.41	1.33	4.57	5.71	5.24	5.00	5.30	3.85	3.85	5.71	5.17	1.40	0.24	▲	2
Q68.	Laboratory Facilities - Degree that laboratory facilities: Fostered student/faculty interaction	68	5.62	1.18	4.76	5.80	4.94	4.00	4.86	4.46	4.00	5.80	4.99	1.55	0.63	▲	2
Q69.	Laboratory Facilities - Degree that laboratory facilities: Allowed use of modern engineering tools	68	5.16	1.29	4.19	5.80	5.18	5.60	5.13	3.69	3.69	5.80	5.06	1.61	0.10	▲	4
Factor 16: Overall Program Satisfaction																	
Q71.	Expectations: Extent that the Undergraduate Engineering program experience fulfill expectations	68	5.24	1.19	4.48	4.60	4.65	6.60	5.22	4.69	4.48	6.60	4.96	1.39	0.28	▲	2
Q72.	Overall Value: Comparing the expense to the quality of education, rate the value of the investment made in Undergraduate Engineering program	68	5.51	1.37	4.19	4.77	4.35	6.60	5.50	4.62	4.19	6.60	5.06	1.41	0.45	▲	2
Q73.	Recommendations: How inclined are you to recommend your Undergraduate Engineering Major to a close friend	68	5.04	1.64	4.24	4.89	4.71	6.20	5.34	5.00	4.24	6.20	5.06	1.58	-0.02	▼	3
Q74.	Recommendations: How inclined are you to recommend your Undergraduate Engineering School to a close friend	68	5.91	1.03	4.33	6.00	4.71	6.60	5.68	4.46	4.33	6.60	5.43	1.46	0.48	▲	3

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## Factor and Question Analysis: Select 6 Comparison for Engineering Major: Chemical

	Your Data			Your Select 6 Data										Comparison to Select 6		
				There are 6 institutions in this comparison group.												
	N	Mean	Std Dev	Sel 1	Sel 2	Sel 3	Sel 4	Sel 5	Sel 6	Range of Means		Wt Mean	Std Dev	Difference in Means	Arrow	Rank Among 7
										Min	Max					
Q4. Satisfaction with quality of teaching in required course work: Calculus	58	4.55	1.86	5.00	5.31	4.29	6.50	5.43	4.55	4.29	6.50	5.20	1.62	-0.65	▼	5
Q5. Satisfaction with quality of teaching in required course work: Differential Equations	64	4.20	1.72	4.55	4.77	4.47	6.80	4.96	4.18	4.18	6.80	4.83	1.74	-0.63	▼	6
Q6. Satisfaction with quality of teaching in required course work: Physics	62	4.10	1.91	4.00	5.14	4.76	6.00	5.08	4.82	4.00	6.00	4.93	1.54	-0.83	▼	6
Q7. Satisfaction with quality of teaching in required course work: Chemistry	65	5.52	1.38	5.50	5.54	4.94	6.80	5.55	5.08	4.94	6.80	5.49	1.35	0.03	▲	4
Q20. Satisfaction with: Quality of Engineering classrooms	67	4.64	1.52	4.45	4.78	4.88	4.80	5.53	4.54	4.45	5.53	5.10	1.44	-0.46	▼	5
Q22. Advising/Computing - Satisfaction with: Academic advising by faculty	68	4.47	1.79	4.41	4.34	5.41	5.60	3.99	4.77	3.99	5.60	4.34	1.91	0.13	▲	4
Q23. Advising/Computing - Satisfaction with: Academic advising by non-faculty	45	5.16	1.33	4.19	4.73	4.83	5.80	4.99	5.00	4.19	5.80	4.87	1.60	0.29	▲	2
Q49. Skill Development - Degree that engineering education enhanced ability to: Recognize need to engage in lifelong learning	68	5.66	1.43	4.68	5.43	5.24	6.00	5.63	5.15	4.68	6.00	5.41	1.36	0.25	▲	2
Q70. Course Comparison: Quality of teaching in your Engineering courses compare to the quality of teaching in Non-Engineering courses on this campus	66	5.47	1.07	4.48	4.54	4.41	5.20	5.28	5.00	4.41	5.28	4.94	1.41	0.53	▲	1

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# University of Wisconsin-Madison

## Factor and Question Analysis: Carnegie Class and All Institution Comparison for Engineering Major: Chemical

		Your Data			Carnegie Class Data and Comparisons There are 29 institutions in this Carnegie Class.						All Institutions Data and Comparisons There are 41 total participating institutions							
		N	Mean	Std Dev	Wt Mean*	Std Dev*	Range of Means		Difference in Means	Arrow	Rank	Wt Mean*	Std Dev*	Range of Means		Difference in Means	Arrow	Rank
							Min	Max						Min	Max			
Factor 1: Instruction and Faculty in Major Courses		67	4.77	1.03	4.81	1.00	3.79	6.36	0.04	▲	10	4.83	1.15	3.79	6.00	0.04	▲	15
Q1.	Quality of Instruction and Faculty in Major Course Work: Teaching	67	5.01	1.02	4.75	1.15	3.79	5.86	0.26	▲	10	4.83	1.15	3.79	6.00	0.18	▲	15
Q2.	Quality of Instruction and Faculty in Major Course Work: Feedback on assignments (other than grades)	66	3.79	1.05	4.28	1.22	3.07	5.20	-0.49	▼	26	4.38	1.23	3.07	5.50	-0.59	▼	37
Q3.	Quality of Instruction and Faculty in Major Course Work: Student/faculty interaction	67	4.46	1.08	4.81	1.40	3.79	6.57	-0.35	▼	23	4.95	1.42	3.79	6.58	-0.49	▼	35
Factor 2: Aspects of Major Courses		68	5.19	1.04	5.22	0.98	4.46	6.93	0.18	▲	10	5.29	0.93	4.22	6.33	0.10	▲	20
Q8.	Satisfaction with: Grades in major courses accurately reflecting students' level of performance	68	4.63	1.64	4.82	1.62	4.00	6.20	-0.19	▼	22	4.88	1.60	3.50	6.20	-0.25	▼	31
Q9.	Satisfaction with: Accessibility of major course instructors outside of class	66	5.32	1.13	5.51	1.29	3.69	6.60	-0.19	▼	25	5.61	1.28	3.69	7.00	-0.29	▼	36
Q10.	Satisfaction with: Responsiveness to major course instructors to student concerns	65	5.40	1.18	5.22	1.37	3.63	6.20	0.18	▲	15	5.32	1.35	3.63	7.00	0.08	▲	24
Q11.	Satisfaction with: Amount of work required of in major courses	66	4.18	1.59	4.59	1.54	3.46	6.40	-0.41	▼	21	4.69	1.50	3.46	6.40	-0.51	▼	33
Q18.	Satisfaction with: Average size of major courses	67	5.76	1.09	5.85	1.16	4.86	6.80	-0.09	▼	21	5.89	1.13	4.50	6.80	-0.13	▼	30
Q19.	Satisfaction with: Availability of courses in major	67	5.84	1.26	5.35	1.60	3.74	6.33	0.49	▲	10	5.34	1.59	3.00	6.33	0.50	▲	11
Factor 3: Breadth of Curriculum		67	4.77	1.00	4.64	1.13	3.70	5.90	0.17	▲	10	4.70	1.10	3.70	5.90	0.07	▲	19
Q12.	Satisfaction with: Engineering curriculum instructors presentation of technology issues	66	4.77	1.35	4.87	1.29	3.92	6.40	-0.10	▼	17	4.96	1.27	3.92	6.40	-0.19	▼	27
Q13.	Satisfaction with: Opportunities for practical experiences within Undergraduate curriculum	65	5.06	1.47	4.62	1.58	3.58	5.78	0.44	▲	8	4.67	1.56	3.58	5.78	0.39	▲	11
Q14.	Satisfaction with: Opportunities for interaction with practitioners	56	4.50	1.44	4.14	1.50	3.25	5.40	0.36	▲	9	4.18	1.49	3.25	5.40	0.32	▲	13
Q21.	Satisfaction with: Amount of work in relationship to what was learned	67	4.73	1.26	4.91	1.45	3.92	6.40	-0.18	▼	19	4.99	1.42	3.00	6.40	-0.26	▼	29
Factor 4: Team & Extracurricular Activities		67	5.26	1.17	5.02	1.10	4.00	5.83	0.24	▲	10	5.16	1.17	4.00	5.83	0.20	▲	12
Q15.	Satisfaction with: Value derived from team experiences	67	5.34	1.32	5.40	1.39	4.46	6.43	-0.06	▼	18	5.45	1.35	3.50	6.43	-0.11	▼	27
Q16.	Satisfaction with: Value of Engineering program student organization activities	55	5.05	1.53	4.80	1.45	3.50	5.69	0.25	▲	12	4.85	1.43	3.50	6.25	0.20	▲	18
Q17.	Satisfaction with: Leadership opportunities in Engineering program's extracurricular activities	52	5.23	1.44	4.83	1.42	3.17	5.80	0.40	▲	7	4.85	1.41	3.00	5.80	0.38	▲	10

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# University of Wisconsin-Madison

## Factor and Question Analysis: Carnegie Class and All Institution Comparison for Engineering Major: Chemical

		Your Data			Carnegie Class Data and Comparisons There are 29 institutions in this Carnegie Class.							All Institutions Data and Comparisons There are 41 total participating institutions						
		N	Mean	Std Dev	Wt Mean*	Std Dev*	Range of Means		Difference in Means	Arrow	Rank	Wt Mean*	Std Dev*	Range of Means		Difference in Means	Arrow	Rank
							Min	Max						Min	Max			
Factor: Computing Resources		68	6.35	0.84	5.58	1.45	3.40	6.50	0.77	▲	3	5.59	1.41	3.40	6.60	0.76	▲	5
Q24.	Advising/Computing - Satisfaction with: Quality of computing resources	68	6.35	0.84	5.58	1.45	3.40	6.50	0.77	▲	3	5.59	1.41	3.40	6.60	0.76	▲	5
Q25.	Advising/Computing - Satisfaction with: Availability of computers in the Engineering School	68	6.04	1.04	5.62	1.51	2.71	6.70	0.42	▲	9	5.65	1.49	2.71	6.70	0.39	▲	14
Q26.	Advising/Computing - Satisfaction with: Remote access to Engineering School's computer network	54	5.69	1.40	4.78	1.80	2.14	6.04	0.91	▲	4	4.86	1.77	2.14	6.04	0.83	▲	9
Q27.	Advising/Computing - Satisfaction with: Training to utilize Engineering School's computing resources	62	4.71	1.42	4.52	1.60	3.00	5.52	0.19	▲	10	4.59	1.59	3.00	5.65	0.12	▲	15
Factor: Fellow Students		68	5.74	0.98	5.62	1.10	4.77	6.80	0.12	▲	12	5.62	1.10	4.00	6.80	0.12	▲	18
Q28.	Satisfaction with characteristics of your fellow students': Academic quality	68	5.94	1.03	5.69	1.17	4.94	6.80	0.25	▲	10	5.68	1.19	4.00	6.80	0.26	▲	15
Q29.	Satisfaction with characteristics of your fellow students': Ability to work in teams	68	5.62	1.17	5.57	1.33	4.69	6.43	0.05	▲	17	5.58	1.34	3.50	6.43	0.04	▲	23
Q30.	Satisfaction with characteristics of your fellow students': Level of camaraderie	68	5.68	1.24	5.59	1.47	4.45	6.80	0.09	▲	15	5.61	1.49	3.00	7.00	0.07	▲	20
Factor: Career Services and Job Placement		60	5.78	1.29	4.76	1.79	2.43	6.20	0.70	▲	3	4.68	1.80	2.25	6.20	0.70	▲	3
Q31.	Career Services - Satisfaction with: Assistance in preparation for permanent job search	60	5.68	1.53	4.76	1.79	2.43	6.20	0.92	A	3	4.68	1.80	2.25	6.20	1.00	▲	3
Q32.	Career Services - Satisfaction with: Geographic distribution of companies recruiting on campus	61	5.10	1.77	4.30	1.81	1.86	6.60	0.80	A	4	4.20	1.85	1.86	6.60	0.90	▲	4
Q33.	Career Services - Satisfaction with: Access to school's alumni to cultivate career opportunities	53	4.00	1.45	3.99	1.64	2.86	6.80	0.01	▲	13	3.99	1.66	1.67	6.80	0.01	▲	19
Q34.	Career Services - Satisfaction with: Number of companies recruiting on campus	64	5.69	1.41	4.49	1.85	1.71	6.80	1.20	▲	3	4.36	1.89	1.00	6.80	1.33	▲	3
Q35.	Career Services - Satisfaction with: Quality of companies recruiting on campus	64	5.53	1.65	4.97	1.75	1.71	6.80	0.56	A	7	4.85	1.79	1.71	6.80	0.68	▲	7

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# University of Wisconsin-Madison

## Factor and Question Analysis: Carnegie Class and All Institution Comparison for Engineering Major: Chemical

		Your Data			Carnegie Class Data and Comparisons There are 29 institutions in this Carnegie Class,							All Institutions Data and Comparisons There are 41 total participating institutions						
		N	Mean	Std Dev	Wt Mean*	Std Dev*	Range of Means		Difference in Means	Arrow	Rank	Wt Mean*	Std Dev*	Range of Means		Difference in Means	Arrow	Rank
							Min	Max						Min	Max			
Factor 8: System Design & Problem Solving		68	5.59	1.04	5.26	1.27	3.80	5.92	0.33	▲	7	5.32	1.25	3.80	6.00	0.27	▲	13
Q36.	Skill Development - Degree that engineering education enhanced ability to: Design experiments	68	5.59	1.04	5.26	1.27	3.80	5.92	0.33	▲	7	5.32	1.25	3.80	6.00	0.27	▲	13
Q37.	Skill Development - Degree that engineering education enhanced ability to: Conduct experiments	68	6.06	0.83	5.59	1.13	4.31	6.20	0.47	▲	3	5.63	1.11	4.31	6.27	0.43	▲	5
Q38.	Skill Development - Degree that engineering education enhanced ability to: Analyze and interpret data	68	6.29	0.69	5.92	0.98	5.20	6.29	0.37	▲	1	5.93	0.96	5.20	6.40	0.36	▲	2
Q39.	Skill Development - Degree that engineering education enhanced ability to: Design a system, component, or process to meet desired needs	68	5.76	1.13	5.53	1.19	4.20	6.40	0.23	▲	7	5.56	1.18	4.20	6.67	0.20	▲	14
Q40.	Skill Development - Degree that engineering education enhanced ability to: Function on multidisciplinary teams	66	5.42	1.24	5.21	1.56	4.25	6.00	0.21	▲	12	5.24	1.54	4.25	6.00	0.18	▲	17
Factor 9: Impact of Engineering Solutions		68	4.52	1.56	4.98	1.42	3.75	5.82	-0.16	▼	25	5.05	1.48	3.75	6.08	-0.57	▼	38
Q42.	Skill Development - Degree that engineering education enhanced ability to: Understand ethical responsibilities	68	4.43	1.60	4.98	1.56	3.40	5.88	-0.55	▼	26	5.05	1.53	3.40	6.08	-0.62	▼	38
Q43.	Skill Development - Degree that engineering education enhanced ability to: Understand the impact of engineering solutions in a global/societal context	67	4.61	1.67	4.98	1.50	3.82	5.82	-0.37	▼	24	5.01	1.48	3.82	6.20	-0.40	▼	34
Factor 10: Use of Tools and Text		68	5.54	1.19	5.23	1.31	4.14	6.36	0.03	▲	8	5.24	1.31	4.14	6.36	0.30	▲	13
Q44.	Skill Development - Degree that engineering education enhanced ability to: Use modern engineering tools	68	5.54	1.19	5.23	1.31	4.14	6.36	0.31	▲	8	5.24	1.31	4.14	6.36	0.30	▲	13
Q45.	Skill Development - Degree that engineering education enhanced ability to: Communicate using oral progress reports	68	4.99	1.20	5.42	1.32	4.08	6.28	-0.43	▼	26	5.48	1.30	4.08	6.80	-0.49	▼	38
Q46.	Skill Development - Degree that engineering education enhanced ability to: Communicate using written progress reports	67	5.97	0.90	5.70	1.16	4.46	6.56	0.27	▲	9	5.71	1.16	4.46	6.56	0.26	▲	13
Q47.	Skill Development - Degree that engineering education enhanced ability to: Pilot test a component prior to implementation	58	3.90	1.65	4.12	1.64	2.53	5.21	-0.22	▼	20	4.20	1.64	2.53	5.50	-0.30	▼	32
Q48.	Skill Development - Degree that engineering education enhanced ability to: Use text materials to support project design	68	5.54	1.04	5.37	1.24	4.11	6.27	0.17	▲	9	5.37	1.25	4.11	6.27	0.17	▲	12

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# University of Wisconsin-Madison

## Factor and Question Analysis: Carnegie Class and All Institution Comparison for Engineering Major: Chemical

		Your Data			Carnegie Class Data and Comparisons							All Institutions Data and Comparisons						
					There are 29 institutions in this Carnegie Class.							There are 41 total participating institutions						
		N	Mean	Std Dev	Wt Mean*	Std Dev*	Range of Means		Difference in Means	Arrow	Rank	Wt Mean*	Std Dev*	Range of Means		Difference in Means	Arrow	Rank
Min	Max						Min	Max										
Factor: Apply Knowledge and Identify Problem		68	6.25	0.76	5.88	1.02	5.15	6.40	0.37	▲	4	5.89	1.01	5.10	6.62	0.36	▲	5
Q41.	Skill Development - Degree that engineering education enhanced ability to: Solve engineering problems	68	6.21	0.78	5.83	1.08	5.00	6.80	0.38	▲	6	5.84	1.06	5.00	6.80	0.37	▲	8
Q51.	Skill Development - Degree that engineering education enhanced ability to: Apply knowledge of mathematics	68	6.10	0.96	5.95	0.98	5.42	6.80	0.15	▲	12	5.95	0.97	5.20	6.80	0.15	▲	16
Q52.	Skill Development - Degree that engineering education enhanced ability to: Apply knowledge of science	68	6.03	0.83	5.90	0.96	5.25	6.80	0.13	▲	9	5.92	0.94	5.10	6.80	0.11	▲	17
Q53.	Skill Development - Degree that engineering education enhanced ability to: Apply knowledge of engineering	68	6.04	0.80	5.79	1.02	5.00	6.80	0.25	▲	6	5.82	1.00	5.00	6.80	0.22	▲	11
Q54.	Skill Development - Degree that engineering education enhanced ability to: Identify engineering problems	68	6.04	0.80	5.79	1.02	5.00	6.80	0.25	▲	6	5.82	1.00	5.00	6.80	0.22	▲	11
Q54.	Skill Development - Degree that engineering education enhanced ability to: Formulate engineering problems	68	5.74	0.86	5.46	1.18	4.54	6.40	0.28	▲	7	5.50	1.15	4.54	6.50	0.24	▲	12
Q55.	Skill Development - Degree that engineering education enhanced ability to: Understand contemporary issues	68	4.75	1.57	5.04	1.40	4.10	6.40	-0.29	▼	24	5.08	1.37	4.10	6.40	-0.33	▼	35
Factor: Develop Experience Built on Coursework		67	5.48	1.04	5.61	1.24	4.00	6.30	-0.03	▼	17	5.65	1.21	4.00	6.50	-0.07	▼	24
Q56.	Major Design Experience - Degree that the major design experience: Built on knowledge from previous course work	67	5.58	1.02	5.61	1.24	4.00	6.30	-0.03	▼	17	5.65	1.21	4.00	6.50	-0.07	▼	24
Q57.	Major Design Experience - Degree that the major design experience: Built on skills from previous course work	67	5.55	1.03	5.56	1.25	4.08	6.22	-0.01	▼	16	5.60	1.22	4.08	6.50	-0.05	▼	23
Q58.	Major Design Experience - Degree that the major design experience: Incorporated engineering standards	66	5.14	1.24	5.26	1.29	4.17	6.08	-0.12	▼	19	5.32	1.27	4.00	6.37	-0.18	▼	28

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# University of Wisconsin-Madison

## Factor and Question Analysis: Carnegie Class and All Institution Comparison for Engineering Major: Chemical

	Your Data			Carnegie Class Data and Comparisons There are 29 institutions in this Carnegie Class.							All Institutions Data and Comparisons There are 41 total participating institutions						
	N	Mean	Std Dev	Wt Mean*	Std Dev*	Range of Means		Difference in Means	Arrow	Rank	Wt Mean*	Std Dev*	Range of Means		Difference in Means	Arrow	Rank
						Min	Max						Min	Max			
Factor 13: Major Design Experience Issues	67	4.33	1.48	4.92	1.56	3.55	6.00	-0.59	▼	24	4.99	1.52	3.55	7.00	-0.66	▼	36
Q59. Major Design Experience - Degree that the major design experience: Addressed Economic issues	67	5.66	1.07	5.47	1.32	4.53	6.37	0.19	▲	14	5.48	1.31	3.33	6.50	0.18	▲	19
Q60. Major Design Experience - Degree that the major design experience: Addressed Environmental issues	67	4.33	1.48	4.92	1.56	3.55	6.00	-0.59	▼	24	4.99	1.52	3.55	7.00	-0.66	▼	36
Q61. Major Design Experience - Degree that the major design experience: Addressed Sustainability issues	66	4.53	1.38	4.75	1.51	3.38	6.00	-0.22	▼	22	4.82	1.49	3.38	6.33	-0.29	▼	33
Q62. Major Design Experience - Degree that the major design experience: Addressed Manufacturability issues	66	4.65	1.42	4.74	1.56	3.22	5.71	-0.09	▼	20	4.83	1.52	3.22	6.00	-0.18	▼	30
Q63. Major Design Experience - Degree that the major design experience: Addressed Ethical issues	67	4.16	1.51	4.51	1.67	2.93	5.64	-0.35	▼	24	4.59	1.65	2.93	6.00	-0.43	▼	35
Q64. Major Design Experience - Degree that the major design experience: Addressed Health and Safety issues	67	4.33	1.50	5.02	1.55	3.20	5.95	-0.69	▼	26	5.07	1.52	3.20	6.50	-0.74	▼	38
Q65. Major Design Experience - Degree that the major design experience: Addressed Social issues	67	3.61	1.48	4.19	1.65	2.60	5.29	-0.58	▼	25	4.29	1.62	2.60	5.29	-0.68	▼	37
Q66. Major Design Experience - Degree that the major design experience: Addressed Political issues	67	3.03	1.41	3.62	1.78	2.20	5.14	-0.59	▼	26	3.75	1.78	2.20	5.14	-0.72	▼	38
Factor 14: Laboratory Facilities	68	5.41	1.33	5.18	1.41	3.31	6.09	0.23	▲	13	5.23	1.38	3.31	6.20	0.18	▲	19
Q67. Laboratory Facilities - Degree that laboratory facilities: Established an atmosphere conducive to learning	68	5.41	1.33	5.18	1.41	3.31	6.09	0.23	▲	13	5.23	1.38	3.31	6.20	0.18	▲	19
Q68. Laboratory Facilities - Degree that laboratory facilities: Fostered student/faculty interaction	68	5.62	1.18	5.21	1.46	3.25	5.95	0.41	▲	7	5.28	1.42	3.25	6.19	0.34	▲	12
Q69. Laboratory Facilities - Degree that laboratory facilities: Allowed use of modern engineering tools	68	5.16	1.29	4.97	1.53	3.10	6.20	0.19	▲	14	5.01	1.51	3.10	6.50	0.15	▲	21
Factor 15: Overall Program Effectiveness	68	5.24	1.19	4.88	1.42	3.67	6.60	0.36	▲	10	4.95	1.40	3.00	6.60	0.29	▲	14
Q71. Expectations: Extent that the Undergraduate Engineering program experience fulfill expectations	68	5.24	1.19	4.88	1.42	3.67	6.60	0.36	▲	10	4.95	1.40	3.00	6.60	0.29	▲	14
Q72. Overall Value: Comparing the expense to the quality of education, rate the value of the investment made in Undergraduate Engineering program	68	5.51	1.37	4.90	1.47	3.50	6.60	0.61	▲	4	4.88	1.45	3.50	6.60	0.63	▲	6
Q73. Recommendations: How inclined are you to recommend your Undergraduate Engineering Major to a close friend	68	5.04	1.64	4.95	1.69	2.83	6.26	0.09	▲	14	4.99	1.66	2.83	6.26	0.05	▲	21
Q74. Recommendations: How inclined are you to recommend your Undergraduate Engineering School to a close friend	68	5.91	1.03	5.15	1.54	4.22	6.60	0.76	▲	7	5.19	1.53	4.00	6.60	0.72	▲	8

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# University of Wisconsin-Madison

## Factor and Question Analysis: Carnegie Class and All Institution Comparison for Engineering Major: Chemical

		Your Data			Carnegie Class Data and Comparisons There are 29 institutions in this Carnegie Class.							All Institutions Data and Comparisons There are 41 total participating institutions						
		N	Mean	Std Dev	Wt Mean*	Std Dev*	Range of Means		Difference in Means	Arrow	Rank	Wt Mean*	Std Dev*	Range of Means		Difference in Means	Arrow	Rank
							Min	Max						Min	Max			
NOTE: The question(s) below do not comprise a Carnegie Class																		
Q4.	Satisfaction with quality of teaching in required course work: Calculus	58	4.55	1.86	5.06	1.67	3.75	6.50	-0.51	▼	21	5.08	1.63	2.00	6.50	-0.53	▼	29
Q5.	Satisfaction with quality of teaching in required course work: Differential Equations	64	4.20	1.72	4.85	1.73	3.50	6.80	-0.65	▼	25	4.91	1.72	2.00	6.80	-0.71	▼	34
Q6.	Satisfaction with quality of teaching in required course work: Physics	62	4.10	1.91	4.53	1.65	3.29	6.00	-0.43	▼	24	4.56	1.66	2.67	6.12	-0.46	▼	30
Q7.	Satisfaction with quality of teaching in required course work: Chemistry	65	5.52	1.38	5.31	1.42	3.57	6.80	0.21	▲	8	5.29	1.44	3.28	6.80	0.23	▲	14
Q20.	Satisfaction with: Quality of Engineering classrooms	67	4.64	1.52	5.05	1.47	3.00	6.33	-0.41	▼	20	5.07	1.45	3.00	6.50	-0.43	▼	29
Q22.	Advising/Computing - Satisfaction with: Academic advising by faculty	68	4.47	1.79	4.77	1.81	3.17	6.56	-0.30	▼	19	4.82	1.77	3.17	6.56	-0.35	▼	27
Q23.	Advising/Computing - Satisfaction with: Academic advising by non-faculty	45	5.16	1.33	4.79	1.57	3.00	6.29	0.37	▲	6	4.78	1.54	3.00	6.50	0.38	▲	9
Q49.	Skill Development - Degree that engineering education enhanced ability to: Recognize need to engage in lifelong learning	68	5.66	1.43	5.43	1.40	4.25	6.24	0.23	▲	9	5.48	1.37	4.25	6.50	0.18	▲	15
Q70.	Course Comparison: Quality of teaching in your Engineering courses compare to the quality of teaching in Non-Engineering courses on this campus	66	5.47	1.07	5.06	1.47	3.75	6.29	0.41	▲	9	5.13	1.45	3.75	7.00	0.34	▲	13

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# University of Wisconsin-Madison

## ABET Questions: All Comparative Groups for Engineering Major: Chemical

Question Means Sorted from Highest Mean to Lowest Mean	Your Data	Select 6 Comparison There are 6 institutions in this comparison group.										Carnegie Class				All Institutions			
		Sel 1	Sel 2	Sel 3	Sel 4	Sel 5	Sel 6	Mean	Difference	Rank	Mean	Difference	Rank	Mean	Difference	Rank			
ABET: Ability to apply knowledge of mathematics, science, and engineering																			
Q50. Skill Development - Degree that engineering education enhanced ability to: Apply knowledge of mathematics	6.21	5.32	5.83	5.65	6.80	6.10	6.08	5.93	0.28	▲	2	5.83	0.38	▲	6	5.84	0.37	▲	8
Q51. Skill Development - Degree that engineering education enhanced ability to: Apply knowledge of science	6.10	5.64	5.83	6.12	6.80	6.19	6.00	6.05	0.05	▲	4	5.95	0.15	▲	12	5.95	0.15	▲	16
Q52. Skill Development - Degree that engineering education enhanced ability to: Apply knowledge of engineering	6.03	5.68	5.86	5.76	6.80	6.01	5.85	5.93	0.10	▲	2	5.90	0.13	▲	9	5.92	0.11	▲	17
ABET: Ability to design and conduct experiments as well as to analyze and interpret data																			
Q38. Skill Development - Degree that engineering education enhanced ability to: Analyze and interpret data	6.29	5.82	6.17	6.00	5.80	6.18	5.62	6.07	0.22	▲	1	5.92	0.37	▲	1	5.93	0.36	▲	2
Q37. Skill Development - Degree that engineering education enhanced ability to: Conduct experiments	6.06	5.18	5.89	5.47	6.20	5.84	5.23	5.70	0.36	▲	2	5.59	0.47	▲	3	5.63	0.43	▲	5
Q36. Skill Development - Degree that engineering education enhanced ability to: Design experiments	5.59	5.05	5.46	5.06	5.60	5.12	4.54	5.39	0.20	▲	3	5.26	0.33	▲	7	5.32	0.27	▲	13
ABET: Ability to design a system, component, or process to meet desired needs																			
Q39. Skill Development - Degree that engineering education enhanced ability to: Design a system, component, or process to meet desired needs	5.76	5.59	5.51	5.65	6.40	5.70	4.50	5.59	0.17	▲	2	5.53	0.23	▲	7	5.56	0.20	▲	14
ABET: Ability to function on multi-disciplinary teams																			
Q40. Skill Development - Degree that engineering education enhanced ability to: Function on multidisciplinary teams	5.42	4.86	5.46	5.35	6.00	5.52	4.73	5.38	0.04	▲	4	5.21	0.21	▲	12	5.24	0.18	▲	17

▼: Wisc has a lower mean than the mean of the comparative group ▲: Wisc has a higher mean than the mean of the comparative group

NOTE: Carnegie Class and All Institutions Means are weighted are calculated without University of Wisconsin-Madison's data included

NOTE: There are 29 institutions in this Carnegie Class. There are 41 total participating institutions.

# University of Wisconsin-Madison

## ABET Questions: All Comparative Groups for Engineering Major: Chemical

Question Means Sorted from Highest Mean to Lowest Mean	Your Data	Select 6 Comparison There are 6 institutions in this comparison group.										Carnegie Class				All Institutions			
		Sel 1	Sel 2	Sel 3	Sel 4	Sel 5	Sel 6	Mean	Difference		Rank	Mean	Difference		Rank	Mean	Difference		Rank
ABET e- Ability to identify, formulate, and solve engineering problems																			
Q41. Skill Development - Degree that engineering education enhanced ability to: Solve engineering problems	6.25	5.73	6.09	5.88	6.40	5.96	5.15	5.90	0.35	▲	2	5.88	0.37	▲	4	5.89	0.36	▲	5
Q53. Skill Development - Degree that engineering education enhanced ability to: Identify engineering problems	6.04	5.82	6.03	5.71	6.80	5.87	5.23	5.86	0.18	▲	2	5.79	0.25	▲	6	5.82	0.22	▲	11
Q54. Skill Development - Degree that engineering education enhanced ability to: Formulate engineering problems	5.74	5.50	5.66	5.41	6.40	5.46	4.54	5.46	0.28	▲	2	5.46	0.28	▲	7	5.50	0.24	▲	12
ABET f- Understanding of professional and ethical responsibility																			
Q42. Skill Development - Degree that engineering education enhanced ability to: Understand ethical responsibilities	4.43	4.10	4.91	5.24	5.60	5.24	5.38	5.06	-0.63	▼		4.98	-0.55	▼	26	5.05	-0.62	▼	38
ABET g- Ability to communicate effectively																			
Q46. Skill Development - Degree that engineering education enhanced ability to: Communicate using written progress reports	5.97	5.86	5.94	5.24	5.60	5.99	4.46	5.77	0.20	▲	2	5.70	0.27	▲	9	5.71	0.26	▲	13
Q45. Skill Development - Degree that engineering education enhanced ability to: Communicate using oral progress reports	4.99	5.27	5.80	5.59	5.60	5.60	4.08	5.49	-0.50	▼	6	5.42	-0.43	▼	26	5.48	-0.49	▼	38
ABET h- Broad education necessary to understand the impact of engineering solutions in a global and societal context																			
Q43. Skill Development - Degree that engineering education enhanced ability to: Understand the impact of engineering solutions in a global/societal context	4.61	3.82	5.21	5.13	5.40	5.03	5.38	4.96	-0.35	▼	6	4.98	-0.37	▼	24	5.01	-0.40	▼	34

▼: Wisc has a lower mean than the mean of the comparative group    ▲: Wisc has a higher mean than the mean of the comparative group

NOTE: Carnegie Class and All Institutions Means are weighted are calculated without University of Wisconsin-Madison's data included

NOTE: There are 29 institutions in this Carnegie Class. There are 41 total participating institutions.

# University of Wisconsin-Madison

## ABET Questions: All Comparative Groups for Engineering Major: Chemical

Question Means Sorted from Highest Mean to Lowest Mean		Your Data	Select 6 Comparison										Carnegie Class				All Institutions			
			There are 6 institutions in this comparison group.																	
			Sel 1	Sel 2	Sel 3	Sel 4	Sel 5	Sel 6	Mean Difference Rank				Mean Difference Rank				Mean Difference Rank			
ABET 1: Recognition of the need for and inability to engage in lifelong learning																				
Q49.	Skill Development - Degree that engineering education enhanced ability to: <b>Recognize</b> need to <b>engage</b> in lifelong learning	5.66	4.68	5.43	5.24	6.00	5.63	5.15	5.41	0.25	A	2	5.43	0.23	A	9	5.48	0.18	A	15
ABET 1: Knowledge of contemporary issues																				
Q55.	Skill Development * Degree that engineering education enhanced ability to: Understand contemporary issues	4.75	4.95	5.40	5.31	6.40	5.09	4.92	5.18	-0.43	▼	7	5.04	-0.29	▼	24	5.08	-0.33	▼	35
ABET 3: Ability to use the techniques, skills and modern engineering tools necessary for engineering practice																				
Q25.	<b>Advising/Computing</b> - Satisfaction with: Availability of computers in the Engineering School	6.04	5.36	6.03	4.76	5.60	5.46	5.62	5.51	0.53	▲	1	5.62	0.42	▲	9	5.65	0.39	▲	14
Q26.	<b>Advising/Computing</b> - Satisfaction with: Remote access to Engineering School's computer network	5.69	3.67	4.79	4.35	6.00	4.83	4.00	4.62	1.07	▲	2	4.78	0.91	▲	4	4.86	0.83	▲	9
Q44.	Skill Development - Degree that engineering education enhanced ability to: Use modern engineering tools	5.54	5.00	5.54	5.29	5.60	5.59	4.25	5.39	0.15	▲	3	5.23	0.31	▲	8	5.24	0.30	▲	13
Q69.	Laboratory Facilities - Degree that laboratory facilities: Allowed use of modern engineering tools	5.16	4.19	5.80	5.18	5.60	5.13	3.69	5.06	0.10	▲	4	4.97	0.19	▲	14	5.01	0.15	▲	21
Q27.	<b>Advising/Computing</b> - Satisfaction with: Training to utilize Engineering School's computing resources	4.71	4.36	4.44	3.94	5.00	4.71	3.92	4.49	0.22	▲	2	4.52	0.19	▲	10	4.59	0.12	▲	15

▼: Wisc has a lower mean than the mean of the comparative group    ▲: Wisc has a higher mean than the mean of the comparative group

NOTE: Carnegie Class and All Institutions Means are weighted are calculated without University of Wisconsin-Madison's data included

NOTE: There are 29 institutions in this Carnegie Class. There are 41 total participating institutions.

# University of Wisconsin-Madison

## Highest and Lowest Mean Questions for Engineering Major: Chemical

List of questions at the highest mean questions for University of Wisconsin-Madison				Response	Mean	Std. Dev.
Q24. Advising/Computing - Satisfaction with: Quality of computing resources				68	6.35	0.84
Q38. Skill Development - Degree that engineering education enhanced ability to: Analyze and interpret data				68	6.29	0.69
Q41. Skill Development - Degree that engineering education enhanced ability to: Solve engineering problems				68	6.25	0.76
Q50. Skill Development - Degree that engineering education enhanced ability to: Apply knowledge of mathematics				68	6.21	0.78
Q51. Skill Development - Degree that engineering education enhanced ability to: Apply knowledge of science				68	6.10	0.96
Q37. Skill Development - Degree that engineering education enhanced ability to: Conduct experiments				68	6.06	0.83
Q53. Skill Development - Degree that engineering education enhanced ability to: Identify engineering problems				68	6.04	0.80
Q25. Advising/Computing - Satisfaction with: Availability of computers in the Engineering School				68	6.04	1.04
Q52. Skill Development - Degree that engineering education enhanced ability to: Apply knowledge of engineering				68	6.03	0.83
Q46. Skill Development - Degree that engineering education enhanced ability to: Communicate using written progress reports				67	5.97	0.90
Q28. Satisfaction with characteristics of your fellow students: Academic quality				68	5.94	1.03
Q74. Recommendations: How inclined are you to recommend your Undergraduate Engineering School to a close friend				68	5.91	1.03
Q19. Satisfaction with: Availability of courses in major				67	5.84	1.26
Q18. Satisfaction with: Average size of major courses				67	5.76	1.09
Q39. Skill Development - Degree that engineering education enhanced ability to: Design a system, component, or process to meet desired needs				68	5.76	1.13
List of questions at the lowest mean questions for University of Wisconsin-Madison				Response	Mean	Std. Dev.
Q66. Major Design Experience - Degree that the major design experience: Addressed Political issues				67	3.03	1.41
Q65. Major Design Experience - Degree that the major design experience: Addressed Social issues				67	3.61	1.48
Q2. Quality of Instruction and Faculty in Major Course Work: Feedback on assignments (other than grades)				66	3.79	1.05
Q47. Skill Development - Degree that engineering education enhanced ability to: Pilot test a component prior to implementation				58	3.90	1.65
Q33. Career Services - Satisfaction with: Access to school's alumni to cultivate career opportunities				53	4.00	1.45
Q6. Satisfaction with quality of teaching in required course work: Physics				62	4.10	1.91
Q63. Major Design Experience - Degree that the major design experience: Addressed Ethical issues				67	4.16	1.51
Q11. Satisfaction with: Amount of work required of in major courses				66	4.18	1.59
Q5. Satisfaction with quality of teaching in required course work: Differential Equations				64	4.20	1.72
Q60. Major Design Experience - Degree that the major design experience: Addressed Environmental issues				67	4.33	1.48
Q64. Major Design Experience - Degree that the major design experience: Addressed Health and Safety issues				67	4.33	1.50
Q42. Skill Development - Degree that engineering education enhanced ability to: Understand ethical responsibilities				68	4.43	1.60
Q3. Quality of Instruction and Faculty in Major Course Work: Student/faculty interaction				67	4.46	1.08
Q22. Advising/Computing - Satisfaction with: Academic advising by faculty				68	4.47	1.79
Q14. Satisfaction with: Opportunities for interaction with practitioners				56	4.50	1.44



# University of Wisconsin-Madison

## Question Competitive Analysis: Select 6 Comparison for Engineering Major: Chemical

	Wisc	Selected	Distance
Q26. Advising/Computing - Satisfaction with: Remote access to Engineering School's computer network	5.69	4.62	1.07
Q24. Advising/Computing - Satisfaction with: Quality of computing resources	6.35	5.54	0.81
Q31. Career Services - Satisfaction with: Assistance in preparation for permanent job search	5.68	4.89	0.79
Q34. Career Services - Satisfaction with: Number of companies recruiting on campus	5.69	5.05	0.64
Q68. Laboratory Facilities - Degree that laboratory facilities: Fostered student/faculty interaction	5.62	4.99	0.63
Q19. Satisfaction with: Availability of courses in major	5.84	5.30	0.54
Q70. Course Comparison: Quality of teaching in your Engineering courses compare to the quality of teaching in Non-Engineering courses on this campus	5.47	4.94	0.53
Q25. Advising/Computing - Satisfaction with: Availability of computers in the Engineering School	6.04	5.51	0.53
Q74. Recommendations: How inclined are you to recommend your Undergraduate Engineering School to a close friend	5.91	5.43	0.48
Q17. Satisfaction with: Leadership opportunities in Engineering program's extracurricular activities	5.23	4.76	0.47
Q72. Overall Value: Comparing the expense to the quality of education, rate the value of the investment made in Undergraduate Engineering program	5.51	5.06	0.45
Q32. Career Services - Satisfaction with: Geographic distribution of companies recruiting on campus	5.10	4.66	0.44
Q14. Satisfaction with: Opportunities for interaction with practitioners	4.50	4.11	0.39
Q37. Skill Development - Degree that engineering education enhanced ability to: Conduct experiments	6.06	5.70	0.36
Q41. Skill Development - Degree that engineering education enhanced ability to: Solve engineering problems	6.25	5.90	0.35
Greatest Negative Difference Between Your Data and Your Selected			
	Wisc	Selected	Distance
Q6. Satisfaction with quality of teaching in required course work: Physics	4.10	4.93	-0.83
Q64. Major Design Experience - Degree that the major design experience: Addressed Health and Safety issues	4.33	5.12	-0.79
Q60. Major Design Experience - Degree that the major design experience: Addressed Environmental issues	4.33	4.99	-0.66
Q4. Satisfaction with quality of teaching in required course work: Calculus	4.55	5.20	-0.65
Q66. Major Design Experience - Degree that the major design experience: Addressed Political issues	3.03	3.67	-0.64
Q65. Major Design Experience - Degree that the major design experience: Addressed Social issues	3.61	4.24	-0.63
Q5. Satisfaction with quality of teaching in required course work: Differential Equations	4.20	4.83	-0.63
Q42. Skill Development - Degree that engineering education enhanced ability to: Understand ethical responsibilities	4.43	5.06	-0.63
Q45. Skill Development - Degree that engineering education enhanced ability to: Communicate using oral progress reports	4.99	5.49	-0.50
Q63. Major Design Experience - Degree that the major design experience: Addressed Ethical issues	4.16	4.63	-0.47
Q20. Satisfaction with: Quality of Engineering classrooms	4.64	5.10	-0.46
Q55. Skill Development - Degree that engineering education enhanced ability to: Understand contemporary issues	4.75	5.18	-0.43
Q43. Skill Development - Degree that engineering education enhanced ability to: Understand the impact of engineering solutions in a global/societal context	4.61	4.96	-0.35
Q2. Quality of Instruction and Faculty in Major Course Work: Feedback on assignments (other than grades)	3.79	4.10	-0.31
Q33. Career Services - Satisfaction with: Access to school's alumni to cultivate career opportunities	4.00	4.30	-0.30

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

Greater Positive Difference Between This Year's Question Means and Last Year's Question Means		2002	2003	Difference
Q6.	Satisfaction with quality of teaching in required course work: <b>Physics</b>	4.10	3.31	0.79
Q34.	Career Services - Satisfaction with: Number of companies recruiting on campus	5.69	5.04	0.65
Q13.	Satisfaction with: Opportunities for practical experiences within Undergraduate curriculum	5.06	4.49	0.57
Q68.	Laboratory Facilities - Degree that laboratory facilities: Fostered <b>student/faculty</b> interaction	5.62	5.08	0.54
Q25.	Advising/Computing - Satisfaction with: Availability of computers in the Engineering School	6.04	5.57	0.47
Q73.	Recommendations: How inclined are you to recommend your Undergraduate Engineering Major to a close friend	5.04	4.63	0.41
Q24.	Advising/Computing - Satisfaction with: Quality of computing resources	6.35	6.00	0.35
Q22.	Advising/Computing - Satisfaction with: Academic advising by faculty	4.47	4.14	0.33
Q26.	Advising/Computing - Satisfaction with: Remote access to Engineering School's computer network	5.69	5.37	0.32
Q69.	Laboratory Facilities - Degree that laboratory facilities: Allowed use of modern engineering tools	5.16	4.86	0.30
Q47.	Skill Development - Degree that engineering education enhanced ability to: Pilot test a component prior to implementation	3.90	3.65	0.25
Q72.	Overall Value: comparing the expense to the quality of education, rate the value of the investment made in Undergraduate Engineering program	5.51	5.27	0.24
Q14.	Satisfaction with: Opportunities for interaction with practitioners	4.50	4.27	0.23
Q46.	Skill Development - Degree that engineering education enhanced ability to: Communicate using written progress reports	5.97	5.76	0.21
Q11.	Satisfaction with: Amount of work required of in major courses	4.18	3.98	0.20
Greater Negative Difference Between This Year's Question Means and Last Year's Question Means		2002	2003	Difference
Q60.	Major Design Experience - Degree that the major design experience: Addressed Environmental issues	4.33	4.92	-0.59
Q4.	Satisfaction with quality of teaching in required course work: Calculus	4.55	5.09	-0.54
Q55.	Skill Development - Degree that engineering education enhanced ability to: Understand contemporary issues	4.75	5.12	-0.37
Q56.	Major Design Experience - Degree that the major design experience: Built on knowledge from previous course work	5.58	5.92	-0.34
Q7.	Satisfaction with quality of teaching in required course work: Chemistry	5.52	5.86	-0.34
Q42.	Skill Development - Degree that engineering education enhanced ability to: Understand ethical responsibilities	4.43	4.76	-0.33
Q12.	Satisfaction with: Engineering curriculum instructors presentation of technology issues	4.77	5.10	-0.33
Q20.	Satisfaction with: Quality of Engineering classrooms	4.64	4.96	-0.32
Q45.	Skill Development - Degree that engineering education enhanced ability to: Communicate using oral progress reports	4.99	5.30	-0.31
Q5.	Satisfaction with quality of teaching in required course work: Differential Equations	4.20	4.50	-0.30
Q32.	Career Services - Satisfaction with: Geographic distribution of companies recruiting on campus	5.10	5.39	-0.29
Q2.	Quality of Instruction and Faculty in Major Course Work: Feedback on assignments (other than grades)	3.79	4.08	-0.29
Q33.	Career Services - Satisfaction with: Access to school's alumni to cultivate career opportunities	4.00	4.29	-0.29
Q9.	Satisfaction with: Accessibility of major course instructors outside of class	5.32	5.60	-0.28
Q65.	Major Design Experience - Degree that the major design experience: Addressed Social issues	3.61	3.88	-0.27

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

# University of Wisconsin-Madison

## Longitudinal: Five-Year Comparison for Engineering Major: Chemical

	2005's Data			2004's Data			Comparison		Previous Year's Data							
	N	Mean	Std Dev	N	Mean	Std Dev	Difference	Arrow	2003's Data		2002's Data		2001's Data		2000's Data	
<b>Factor 1: Instruction &amp; Interaction in Major</b>	67	4.46	1.08	51	4.55	1.21	-0.09		NA		NA		NA		NA	
Q1. Quality of Instruction and Faculty in Major Course Work: Teaching	67	5.01	1.02	51	5.24	1.09	-0.23	↓	NA		NA		NA		NA	
Q2. Quality of Instruction and Faculty in Major Course Work: Feedback on assignments (other than grades)	66	3.79	1.05	51	4.08	1.25	-0.29	↓	NA		NA		NA		NA	
Q3. Quality of Instruction and Faculty in Major Course Work: Student/faculty interaction	67	4.46	1.08	51	4.55	1.21	-0.09		NA		NA		NA		NA	
<b>Factor 2: Aspects of Major Courses</b>	68	4.63	1.64	51	4.88	1.66	-0.25	↓	NA		NA		NA		NA	
Q8. Satisfaction with: Grades in major courses accurately reflecting students' level of performance	68	4.63	1.64	51	4.88	1.66	-0.25	↓	NA		NA		NA		NA	
Q9. Satisfaction with: Accessibility of major course instructors outside of class	66	5.32	1.13	50	5.60	1.12	-0.28	↓	NA		NA		NA		NA	
Q10. Satisfaction with: Responsiveness to major course instructors to student concerns	65	5.40	1.18	51	5.31	1.17	0.09		NA		NA		NA		NA	
Q11. Satisfaction with: Amount of work required of in major courses	66	4.18	1.59	51	3.98	1.58	0.20	↑	NA		NA		NA		NA	
Q18. Satisfaction with: Average size of major courses	67	5.76	1.09	51	5.96	1.04	-0.20	↓	NA		NA		NA		NA	
Q19. Satisfaction with: Availability of courses in major	67	5.84	1.26	51	5.84	1.38	0.00		NA		NA		NA		NA	
<b>Factor 3: Breadth of Curriculum</b>	66	4.77	1.35	51	5.10	1.15	-0.33	↓	NA		NA		NA		NA	
Q12. Satisfaction with: Engineering curriculum instructors presentation of technology issues	66	4.77	1.35	51	5.10	1.15	-0.33	↓	NA		NA		NA		NA	
Q13. Satisfaction with: Opportunities for practical experiences within Undergraduate curriculum	65	5.06	1.47	50	5.49	1.68	-0.43	↓	NA		NA		NA		NA	
Q14. Satisfaction with: Opportunities for interaction with practitioners	56	4.50	1.44	49	4.27	1.44	0.23	↑	NA		NA		NA		NA	
Q21. Satisfaction with: Amount of work in relationship to what was learned	67	4.73	1.26	51	4.88	1.67	-0.15	↓	NA		NA		NA		NA	

Difference = Difference between means. Arrow Designations- ↓ denotes a difference < -0.1; ↑ denotes difference > 0.1

NA: Not Applicable - Your institution did not participate in the study that year, the factor/question is new, or this population did not participate that year

# University of Wisconsin-Madison

## Longitudinal: Five-Year Comparison for Engineering Major: Chemical

		2005's Data			2004's Data			Comparison		Previous Year's Data							
										2003's Data		2002's Data		2001's Data		2000's Data	
		N	Mean	Std Dev	N	Mean	Std Dev	Difference	Arrow	Mean	Difference	Mean	Difference	Mean	Difference	Mean	Difference
Factor 4: Team & Extracurricular Activities		67	5.26	1.16	51	5.22	1.18	-0.04		5.03	-0.23	5.28	-0.03	5.37	0.14	5.11	-0.15
Q15.	Satisfaction with: Value derived from team experiences	67	5.34	1.32	49	5.51	1.26	-0.17	↓	NA		NA		NA		NA	
Q16.	Satisfaction with: Value of Engineering program student organization activities	55	5.05	1.53	40	5.13	1.40	-0.08		NA		NA		NA		NA	
Q17.	Satisfaction with: Leadership opportunities in Engineering program's extracurricular activities	52	5.23	1.44	39	5.15	1.41	0.08		NA		NA		NA		NA	
Factor 5: Computing Resources		68	5.73	0.83	51	5.42	1.19	0.31	↑	5.25	-0.48	5.49	-0.51	5.56	-0.07	5.05	-0.68
Q24.	Advising/Computing - Satisfaction with: Quality of computing resources	68	6.35	0.84	51	6.00	1.30	0.35	↑	NA		NA		NA		NA	
Q25.	Advising/Computing - Satisfaction with: Availability of computers in the Engineering School	68	6.04	1.04	51	5.57	1.53	0.47	↑	NA		NA		NA		NA	
Q26.	Advising/Computing - Satisfaction with: Remote access to Engineering School's computer network	54	5.69	1.40	46	5.37	1.76	0.32	↑	NA		NA		NA		NA	
Q27.	Advising/Computing - Satisfaction with: Training to utilize Engineering School's computing resources	62	4.71	1.42	46	4.59	1.50	0.12	↑	NA		NA		NA		NA	
Factor 6: Fellow Students		68	5.70	0.98	51	5.72	0.92	-0.02		5.86	-0.12	5.76	-0.02	5.85	-0.11	5.86	-0.12
Q28.	Satisfaction with characteristics of your fellow students': Academic quality	68	5.94	1.03	51	5.88	0.93	0.06		NA		NA		NA		NA	
Q29.	Satisfaction with characteristics of your fellow students': Ability to work in teams	68	5.62	1.17	51	5.71	1.22	-0.09		NA		NA		NA		NA	
Q30.	Satisfaction with characteristics of your fellow students': Level of camaraderie	68	5.68	1.24	51	5.57	1.49	0.11	↑	NA		NA		NA		NA	

Difference = Difference between means. Arrow Designations\* ↓ denotes a difference < -0.1; ↑ denotes difference > 0.1  
 NA: Not Applicable - Your institution did not participate in the study that year, the factor/question is new, or this population did not participate that year

# University of Wisconsin-Madison

## Longitudinal: Five-Year Comparison for Engineering Major: Chemical

		2005's Data			2004's Data			Comparison		Previous Year's Data							
		N	Mean	Std Dev	N	Mean	Std Dev	Difference	Arrow	2003's Data		2002's Data		2001's Data		2000's Data	
		N	Mean	Std Dev	N	Mean	Std Dev	Difference	Arrow	Mean	Difference	Mean	Difference	Mean	Difference	Mean	Difference
Factor 7: Career Services and Job Placement		64	5.68	1.53	41	5.27	1.29	0.41	↑	5.66	0.02	5.10	0.57	5.12	0.56	5.25	0.43
Q31.	Career Services - Satisfaction with: Assistance in preparation for permanent job search	60	5.68	1.53	41	5.56	1.29	0.12	↑	NA		NA		NA		NA	
Q32.	Career Services - Satisfaction with: Geographic distribution of companies recruiting on campus	61	5.10	1.77	44	5.39	1.42	-0.29	↓	NA		NA		NA		NA	
Q33.	Career Services - Satisfaction with: Access to school's alumni to cultivate career opportunities	53	4.00	1.45	35	4.29	1.41	-0.29	↓	NA		NA		NA		NA	
Q34.	Career Services - Satisfaction with: Number of companies recruiting on campus	64	5.69	1.41	45	5.04	1.74	0.65	↑	NA		NA		NA		NA	
Q35.	Career Services - Satisfaction with: Quality of companies recruiting on campus	64	5.53	1.65	45	5.80	1.31	-0.27	↓	NA		NA		NA		NA	
Factor 8: System Design & Problem Solving		68	5.88	0.74	51	5.79	0.72	0.09	↑	5.28	0.60	5.59	0.29	5.72	0.16	5.67	0.21
Q36.	Skill Development - Degree that engineering education enhanced ability to: Design experiments	68	5.59	1.04	51	5.49	1.21	0.10	↑	NA		NA		NA		NA	
Q37.	Skill Development - Degree that engineering education enhanced ability to: Conduct experiments	68	6.06	0.83	51	5.98	0.84	0.08		NA		NA		NA		NA	
Q38.	Skill Development - Degree that engineering education enhanced ability to: Analyze and interpret data	68	6.29	0.69	51	6.35	0.69	-0.06		NA		NA		NA		NA	
Q39.	Skill Development - Degree that engineering education enhanced ability to: Design a system, component, or process to meet desired needs	68	5.76	1.13	50	5.60	1.21	0.16	↑	NA		NA		NA		NA	
Q40.	Skill Development - Degree that engineering education enhanced ability to: Function on multidisciplinary teams	66	5.42	1.24	51	5.55	1.30	-0.13	↓	NA		NA		NA		NA	
Factor 9: Improved Engineering Solutions		68	4.62	1.56	51	4.82	1.18	-0.20	↓	5.91	-0.29	4.17	-0.55	4.59	-0.07	4.22	-0.25
Q42.	Skill Development - Degree that engineering education enhanced ability to: Understand ethical responsibilities	68	4.43	1.60	50	4.76	1.42	-0.33	↓	NA		NA		NA		NA	
Q43.	Skill Development - Degree that engineering education enhanced ability to: Understand the impact of engineering solutions in a global/societal context	67	4.61	1.67	51	4.88	1.54	-0.27	↓	NA		NA		NA		NA	

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# University of Wisconsin-Madison

## Longitudinal: Five-Year Comparison for Engineering Major: Chemical

	2005's Data			2004's Data			Comparison		Previous Year's Data							
	N	Mean	Std Dev	N	Mean	Std Dev	Difference	Arrow	2003's Data		2002's Data		2001's Data		2000's Data	
	68	5.54	1.19	51	5.39	0.98	0.15	↑	NA		NA		NA		NA	
Q44. Skill Development - Degree that engineering education enhanced ability to: Use modern engineering tools	68	4.99	1.20	50	5.30	1.11	-0.31	↓	NA		NA		NA		NA	
Q45. Skill Development - Degree that engineering education enhanced ability to: Communicate using oral progress reports	67	5.97	0.90	50	5.76	1.19	0.21	↑	NA		NA		NA		NA	
Q46. Skill Development - Degree that engineering education enhanced ability to: Communicate using written progress reports	58	3.90	1.65	49	3.65	1.60	0.25	↑	NA		NA		NA		NA	
Q47. Skill Development - Degree that engineering education enhanced ability to: Pilot test a component prior to implementation	68	5.54	1.04	51	5.45	1.08	0.09		NA		NA		NA		NA	
Q48. Skill Development - Degree that engineering education enhanced ability to: Use text materials to support project design																

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# University of Wisconsin-Madison

## Longitudinal: Five-Year Comparison for Engineering Major: Chemical

	2005's Data			2004's Data			Comparison		Previous Year's Data							
	N	Mean	Std Dev	N	Mean	Std Dev	Difference	Arrow	2003's Data		2002's Data		2001's Data		2000's Data	
<b>Factor 1: Apply Knowledge and Identify Problems</b>	68	5.87	0.61	51	5.95	0.74	0.09		58	6.20	58	6.07	NA		NA	
Q41. Skill Development - Degree that engineering education enhanced ability to: Solve engineering problems	68	6.25	0.76	51	6.20	0.80	0.05		NA		NA		NA		NA	
Q50. Skill Development - Degree that engineering education enhanced ability to: Apply knowledge of mathematics	68	6.21	0.78	51	6.22	0.90	-0.01		NA		NA		NA		NA	
Q51. Skill Development - Degree that engineering education enhanced ability to: Apply knowledge of science	68	6.10	0.96	51	6.22	1.03	-0.12	↓	NA		NA		NA		NA	
Q52. Skill Development - Degree that engineering education enhanced ability to: Apply knowledge of engineering	68	6.03	0.83	51	6.14	0.89	-0.11	↓	NA		NA		NA		NA	
Q53. Skill Development - Degree that engineering education enhanced ability to: Identify engineering problems	68	6.04	0.80	51	6.00	0.92	0.04		NA		NA		NA		NA	
Q54. Skill Development - Degree that engineering education enhanced ability to: Formulate engineering problems	68	5.74	0.86	51	5.86	0.85	-0.12	↓	NA		NA		NA		NA	
Q55. Skill Development - Degree that engineering education enhanced ability to: Understand contemporary issues	68	4.75	1.57	51	5.12	1.26	-0.37	↓	NA		NA		NA		NA	
<b>Factor 12: Design Experience Built On</b>	67	5.43	0.94	51	5.66	0.73	-0.23		488	5.55	552	5.69	568	5.92	576	6.13
Q56. Major Design Experience - Degree that the major design experience: Built on knowledge from previous course work	67	5.58	1.02	51	5.92	0.80	-0.34	↓	NA		NA		NA		NA	
Q57. Major Design Experience - Degree that the major design experience: Built on skills from previous course work	67	5.55	1.03	51	5.82	0.79	-0.27	↓	NA		NA		NA		NA	
Q58. Major Design Experience - Degree that the major design experience: Incorporated engineering standards	66	5.14	1.24	50	5.24	1.04	-0.10	↓	NA		NA		NA		NA	

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# University of Wisconsin-Madison

## Longitudinal: Five-Year Comparison for Engineering Major: Chemical

	2005's Data			2004's Data			Comparison		Previous Year's Data							
	N	Mean	Std Dev	N	Mean	Std Dev	Difference	Arrow	2003's Data		2002's Data		2001's Data		2000's Data	
<b>Factor: Major Design Experience Issues</b>	<b>67</b>	<b>4.33</b>	<b>1.48</b>	<b>51</b>	<b>4.92</b>	<b>1.52</b>	<b>-0.59</b>		<b>NA</b>		<b>NA</b>		<b>NA</b>		<b>NA</b>	
Q59. Major Design Experience - Degree that the major design experience: Addressed Economic issues	67	5.66	1.07	51	5.63	1.20	0.03		NA		NA		NA		NA	
Q60. Major Design Experience - Degree that the major design experience: Addressed Environmental issues	67	4.33	1.48	51	4.92	1.52	-0.59	↓	NA		NA		NA		NA	
Q61. Major Design Experience - Degree that the major design experience: Addressed Sustainability issues	66	4.53	1.38	51	4.73	1.28	-0.20	↓	NA		NA		NA		NA	
Q62. Major Design Experience - Degree that the major design experience: Addressed Manufacturability issues	66	4.65	1.42	51	4.61	1.40	0.04		NA		NA		NA		NA	
Q63. Major Design Experience - Degree that the major design experience: Addressed Ethical issues	67	4.16	1.51	50	4.04	1.43	0.12	↑	NA		NA		NA		NA	
Q64. Major Design Experience - Degree that the major design experience: Addressed Health and Safety issues	67	4.33	1.50	51	4.45	1.50	-0.12	↓	NA		NA		NA		NA	
Q65. Major Design Experience - Degree that the major design experience: Addressed Social issues	67	3.61	1.48	50	3.88	1.60	-0.27	↓	NA		NA		NA		NA	
Q66. Major Design Experience - Degree that the major design experience: Addressed Political issues	67	3.03	1.41	49	3.24	1.77	-0.21	↓	NA		NA		NA		NA	
<b>Factor: Laboratory Facilities</b>	<b>68</b>	<b>5.41</b>	<b>1.33</b>	<b>51</b>	<b>5.27</b>	<b>1.28</b>	<b>0.14</b>		<b>NA</b>		<b>NA</b>		<b>NA</b>		<b>NA</b>	
Q67. Laboratory Facilities - Degree that laboratory facilities: Established an atmosphere conducive to learning	68	5.41	1.33	51	5.27	1.28	0.14	↑	NA		NA		NA		NA	
Q68. Laboratory Facilities - Degree that laboratory facilities: Fostered student/faculty interaction	68	5.62	1.18	50	5.08	1.44	0.54	↑	NA		NA		NA		NA	
Q69. Laboratory Facilities - Degree that laboratory facilities: Allowed use of modern engineering tools	68	5.16	1.29	51	4.86	1.40	0.30	↑	NA		NA		NA		NA	

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# University of Wisconsin-Madison

## Longitudinal: Five-Year Comparison for Engineering Major: Chemical

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	N	Mean	Std Dev	N	Mean	Std Dev	Difference	Arrow	2003's Data		2002's Data		2001's Data		2000's Data	
									Mean	Difference	Mean	Difference	Mean	Difference	Mean	Difference
Factor: 10 Overall Program Satisfaction	68	5.24	1.19	51	5.04	1.41	0.20	↑	NA		NA		NA		NA	
Q71. Expectations: Extent that the Undergraduate Engineering program experience fulfill expectations	68	5.24	1.19	51	5.04	1.41	0.20	↑	NA		NA		NA		NA	
Q72. Overall Value: Comparing the expense to the quality of education, rate the value of the investment made in Undergraduate Engineering program	68	5.51	1.37	51	5.27	1.71	0.24	↑	NA		NA		NA		NA	
Q73. Recommendations: How inclined are you to recommend your Undergraduate Engineering Major to a close friend	68	5.04	1.64	51	4.63	1.93	0.41	↑	NA		NA		NA		NA	
Q74. Recommendations: How inclined are you to recommend your Undergraduate Engineering School to a close friend	68	5.91	1.03	51	5.75	1.34	0.16	↑	NA		NA		NA		NA	

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# University of Wisconsin-Madison

## Longitudinal: Five-Year Comparison for Engineering Major: Chemical

		2005's Data			2004's Data			Comparison		Previous Year's Data							
		N	Mean	Std Dev	N	Mean	Std Dev	Difference	Arrow	2003's Data		2002's Data		2001's Data		2000's Data	
										Mean	Difference	Mean	Difference	Mean	Difference	Mean	Difference
NOTE: The question(s) below do not contain a survey factor																	
Q4.	Satisfaction with quality of teaching in required course work: Calculus	58	4.55	1.86	47	5.09	1.72	-0.54	↓	NA		NA		NA		NA	
Q5.	Satisfaction with quality of teaching in required course work: Differential Equations	64	4.20	1.72	50	4.50	1.79	-0.30	↓	NA		NA		NA		NA	
Q6.	Satisfaction with quality of teaching in required course work: Physics	62	4.10	1.91	48	3.31	1.93	0.79	↑	NA		NA		NA		NA	
Q7.	Satisfaction with quality of teaching in required course work: Chemistry	65	5.52	1.38	51	5.86	1.15	-0.34	↓	NA		NA		NA		NA	
Q20.	Satisfaction with: Quality of Engineering classrooms	67	4.64	1.52	51	4.96	1.50	-0.32	↓	NA		NA		NA		NA	
Q22.	Advising/Computing - Satisfaction with: Academic advising by faculty	68	4.47	1.79	50	4.14	2.11	0.33	↑	NA		NA		NA		NA	
Q23.	Advising/Computing - Satisfaction with: Academic advising by non-faculty	45	5.16	1.33	39	5.41	1.27	-0.25	↓	NA		NA		NA		NA	
Q49.	Skill Development - Degree that engineering education enhanced ability to: Recognize need to engage in lifelong learning	68	5.66	1.43	51	5.73	1.39	-0.07		NA		NA		NA		NA	
Q70.	Course Comparison: Quality of teaching in your Engineering courses compare to the quality of teaching in Non-Engineering courses on this campus	66	5.47	1.07	51	5.29	1.55	0.18	↑	NA		NA		NA		NA	

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