COOPERATIVE INSTITUTIONAL RESEARCH PROGRAM
at the HIGHER EDUCATION RESEARCH INSTITUTE AT UCLA

ABET: Criteria for Accrediting Engineering Programs

2012 CIRP Surveys

Introduction

Accreditation is an assurance that the professionals that serve us have a solid educational foundation and are capable of leading the way in innovation, emerging technologies, and in anticipating the welfare and safety needs of the public.

--http://www.abet.org/why-accreditation-matters/ retrieved August 12, 2012

For more than 45 years, CIRP surveys have helped institutions understand and demonstrate their strengths as well as focus improvement efforts. Our survey program asks students for information as they begin college on the CIRP Freshman Survey (TFS), at the end of their first year on the Your First College Year Survey (YFCY), in their sophomore and junior years with the Diverse Learning Environments (DLE) survey, and at the end of their senior year on the College Senior Survey (CSS). Faculty are asked for their perspective on many of the same outcomes every three years on the HERI Faculty Survey. While ABET accreditation is voluntary, we know the information programs gain from going through the process can be valuable in delivering the best possible education to students. CIRP surveys are comprehensive in that they cover a wide variety of topic areas relevant to the college experience. Used together, CIRP surveys measure outcomes and tie those outcomes to activities in which students engage, program practices, and the overall climate on campus. Putting these together longitudinally can help programs illustrate the complex issues related to student success and improve the student experience.

How Can CIRP Surveys be Useful in the ABET Process?

Specialized accreditation agencies like ABET are intentionally and specifically emphasizing student learning outcomes, and examining the processes and practices programs have in place to promote, assess and enhance student learning. Results from CIRP surveys can demonstrate the impact of curriculum and pedagogy as well as student expectations and experiences on student learning, and suggest practices that contribute to success. This guide provides suggestions for utilizing CIRP survey results in the ABET accreditation process to address student learning outcomes, program educational objectives, the curriculum, as well as the roles of faculty and facilities in demonstrating continuous improvement.

- Because CIRP surveys are comprehensive, they can be used to address more than student learning. They allow a program to fully explore the broader picture of program impact while

linking together the various aspects of the program—faculty, facilities, curriculum, and technology--that come together to foster student learning and success.

- Used longitudinally, CIRP survey results illustrate that a program measures success based on learning outcomes not teaching inputs, and is serious about advancing the quality of its programs and preparing students who are ready to enter the profession.
- Faculty Survey addresses many of the same issues as the student surveys, including the participation in specific learning activities, importance of specific areas of student learning, nature and frequency of student/faculty interaction, and importance of educational and program goals. Pairing these results provides additional context to student results, and can be used as evidence of areas of strength as well as to deepen discussions of areas that present opportunities for improvement.
- CIRP surveys provide information on aspects of a broad range of program experiences that can help programs identify ABET student learning outcomes as well as how students are performing in program educational objectives.
- Institutions have the ability to compare their performance with comparison groups and national norms on individual items and relevant CIRP Constructs, providing important context for discussions of program goals and objectives.
- Results from CIRP surveys can be used to examine assumptions about the student educational experience and how students use the institution's resources for learning, growth and development.
- Programs can benchmark against themselves over time to examine trends or longitudinally to assess growth and development in their process of continuous improvement.

CIRP in ABET Timelines

Results from CIRP surveys are well-suited in all parts of the ABET accreditation process, including:

- Assessment Planning
- Self-Study
- On-Site Visit
- Due Process response

When and how often to gather evidence for use in the accreditation process are decisions each program will make for itself. The answers to these questions will vary depending on the needs of a given program, its institution and how they intend to use the results as evidence. Some institutions use CIRP results to establish a baseline for programs and other initiatives. Generally speaking, baseline data from three years preceding a review gives an institution ample time to analyze, interpret and disseminate results for the broad-based institutional process required as part of ABET accreditation. This also allows for follow up at appropriate times to demonstrate whether actions and programs are having their intended effect.

Many institutions have data from longitudinal administrations of CIRP surveys. Examining the results longitudinally allows programs to compare results over time and examine areas in which the student experience is changing. Results may also be used as evidence that the program has set appropriate goals, is carefully monitoring its student learning outcomes and has integrated data into decision-making processes.

ABET accreditation may not coincide with regional accreditation or other priorities (e.g., strategic planning) that drive survey participation. ABET review committees will want to collaborate with campus constituencies who have input into institutional decisions about CIRP participation to establish

participation timelines, develop a strategy for the sampling of engineering students (if necessary, see below) and ensure baseline data.

Sampling. Many institutions participating in CIRP surveys administer the surveys to a census of their students (e.g., all first year students, all graduating seniors), however some institutions administer CIRP surveys to a random sample of the population of eligible students (25% of graduating seniors). One important issue for schools using CIRP surveys in ABET accreditation is making sure enough engineering students are surveyed to ensure valid results. Institutions can choose to oversample the engineering population by simply increasing the percentage of engineering students in their sample. While this seems like a straightforward approach, individual programs will need to determine how best to do this. Identifying first-year engineering students may be complicated, especially if students have not yet declared their major. The program might elect to include all students who have enrolled in specific classes, or any student who has identified themselves as interested in engineering, for example.

Data Services

CIRP offers specialized data services that allow for more specific analyses than just comparing students at your institution with those in your comparison groups. For example, institutions seeking ABET accreditation in might wish to compare engineering students at your institution with engineering students in similar programs at similar institutions. There are additional fees associated with data services. More information can be found at http://www.heri.ucla.edu/dsdownloads_reports.php

Forming a Consortium

Engineering programs that use CIRP survey results to support their ABET accreditation may want to explore forming a consortium, a group of schools participating in CIRP surveys in the same administration cycle that agree to share comparative, aggregated data among the group. For more information on forming a consortium, please see http://www.heri.ucla.edu/dsdownloads_special.php

Using CIRP Surveys in ABET Engineering Criteria

Every program approaches ABET accreditation differently, taking into account the mission, goals, practices and policies in place within the program. An important part of the accreditation process is to understand how practices and evidence currently in use can be linked to ABET Criteria.

In preparing this guide, CIRP staff, working in conjunction with several institutions that have undergone ABET accreditation in engineering at the undergraduate level, reviewed ABET Criteria and aligned CIRP survey items that closely corresponded. The goal is to facilitate the use of data and CIRP survey results not only as evidence of how well a program prepares students to enter the profession, but as an element in continuous improvement activities.

This guide is not a toolkit or a comprehensive codebook for mapping CIRP surveys to ABET Criteria. It is a guide to aid institutions in organizing information already available, and to facilitate future planning. Looking systematically at CIRP survey results aligned with ABET Criteria provides an opportunity for discussion about what the results mean for the program, what other evidence can be brought to bear, and what additional information is necessary to further improvement efforts and planning for the future. Both individual survey items and CIRP Constructs can be used to demonstrate and document program effectiveness. When they are presented in context with additional measures of student learning, such as

portfolios, direct assessment, and results from student focus groups or interviews, these results will be most meaningful to program improvement efforts and most persuasive to a visiting team in demonstrating a deep and sustained commitment to student learning.

The following CIRP survey items are mapped to the ABET General Criteria for Baccalaureate Level Programs and do not address specialized program criteria for each engineering subdicsipline.

ABET (Accreditation Board for Engineering and Technology) Criteria for Engineering Programs, 2012

All programs seeking accreditation from the Engineering Accreditation Commission of ABET must demonstrate that they satisfy all of the following General Criteria for Baccalaureate Level Programs.

		Question placement				
Criterion 1. Students	**Item**	**TFS**	**YFCY**	**DLE**	**CSS**	**FAC**
Student performance must be evaluated. Student progress must be monitored to foster success in attaining student outcomes, thereby enabling graduates to attain program educational objectives. Students must be advised regarding curriculum and career matters.	Interacted with: Faculty during office hours		3			
	Interacted with: Graduate students/teaching assistants		3			
	How often: Academic advising		7			
	How often: Received from your professor advice or guidance about your educational program		23		24	
	Utilized: Academic advising			7		
	How often: Career counseling and advising			7		
The program must have and enforce policies for accepting both new and transfer students, awarding appropriate academic credit for courses taken at other institutions, and awarding appropriate academic credit for work in lieu of courses taken at the institution. The program must have and enforce procedures to ensure and document that students who graduate meet all graduation requirements.	Talking to a counselor/academic advisor			TM		
	Before transferring: I received helpful advice about the right courses to complete the requirements to transfer			TR4		
	Before transferring: The guidelines for transferring to this institution were easy to understand			TR4		
	At this college: Campus administrators care about what happens to transfer students			TR4		
	At this college: I have received helpful advice about how to succeed here as a transfer student			TR4		
	Figure out which requirements I need to graduate			TR4		
	Counselors make transfer a priority at this institution			TR2		
	Met with a community college counselor about transferring			TR2		
	Talked with a transfer admissions counselor from a four-year institution			TR2		
	Discussed my academic goals with faculty			TR2		
	How often: Met with an advisor/counselor about your career plans				7	
	Satisfaction: Academic advising				14	
	Satisfaction: Career counseling and advising				14	
	Advising and counseling of students					22

TFS = The Freshman Survey; YFCY = Your First College Year; DLE = Diverse Learning Environments Survey; CSS = College Senior Survey; FAC = The HERI Faculty Survey

The DLE has five modules: TR2 = Climate for Transfer at Two-Year Institutions; TM = Transition to Major; TR4 = Climate for Transfer Students at Four-Year Institutions; IGR = Intergroup Relations; CC = Classroom Climate

The TFS is administered at the beginning of the freshman year; The YFCY is administered at the end of the first year; The DLE is administered during the second and/or third years; The CSS is administered at the end of the senior year; The FAC is administered every three years to faculty.

NOTES:

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		Question placement				
Criterion 2. Program Educational Objectives	**Item**	**TFS**	**YFCY**	**DLE**	**CSS**	**FAC**
The program must have published program educational objectives that are consistent with the mission of the institution, the needs of the program's various constituencies, and these criteria. There must be a documented and effective process, involving program constituencies, for the periodic review and revision of these program educational objectives.						

TFS = The Freshman Survey; YFCY = Your First College Year; DLE = Diverse Learning Environments Survey; CSS = College Senior Survey; FAC = The HERI Faculty Survey

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Criterion 3. Student Outcomes: The program must have documented student outcomes that prepare graduates to attain the program educational objectives.
Student outcomes are outcomes (a) through (k) plus any additional outcomes that may be articulated by the program.

		Question placement				
Criterion 3a.	**Item**	**TFS**	**YFCY**	**DLE**	**CSS**	**FAC**
An ability to apply knowledge of mathematics, science, and engineering.	Perceived growth: Critical thinking skills		2		2	
	Perceived growth: Problem-solving skills		2		2	
	That your courses inspired you to think in new ways		5			
	Rate yourself: Mathematical ability	41	8	16	17	
	Integrate skills and knowledge from different sources and experiences	33	17	18	13	18
	How often: Apply/ied concepts from courses to everyday life/real life situations		23	12	16	
	How often: Worked on independent study projects				7	
	Completed a culminating experience for your degree (e.g., capstone course/project, thesis, comp exam)				8	
	Received from your professor: An opportunity to work on a research project				24	
	To get training for a specific career	38				
	Engaged in academic research that spans multiple disciplines					10
	Instructional techniques/methods: Using real-life problems					19
	Undergraduate goals: Develop ability to think critically					21
	Undergraduate goals: Prepare students for employment after college					21
	Undergraduate goals: Develop creative capacities					21
Criterion 3b.						
An ability to design and conduct experiments, as well as to analyze and interpret data.	Perceived growth: Ability to conduct research		2			
	Perceived growth: Critical thinking skills		2			
	That your courses inspired you to think in new ways		5			
	Support your opinions with a logical argument	33	17	18	13	18
	Seek solutions to problems and explain them to others	33	17	18	13	18
	Evaluate the quality or reliability of information you received	33	17	18	13	18
	Seek alternative solutions to a problem	33	17	18	13	18
	Integrate skills and knowledge from different sources and experiences	33	17	18	13	18
	How often: Worked on a professor's research project		23		7	
	How often: Worked on independent study projects				7	
	Participated in an undergraduate research program (e.g., MARC, MBRS, REU)				8	
	Completed a culminating experience for your degree (e.g., capstone course/project, thesis, comp exam)				8	
	Received from your professor: An opportunity to work on a research				24	
	To get training for a specific career	38				
	Engaged undergraduates on <u>your</u> research project					10
	Worked with undergraduates on a research project					10
	Taught a capstone course					10
	Supervised an undergraduate thesis					10
	Instructional techniques/methods: Experiential learning/Field studies					19

Criterion 3b, Cont.	Item	TFS	YFCY	DLE	CSS	FAC
	Instructional techniques/methods: Reflective writing/journaling					19
	Instructional techniques/methods: Using real-life problems					19
	Undergraduate goals: Develop ability to think critically					21
	Undergraduate goals: Prepare students for employment after college					21
	Undergraduate goals: Develop creative capacities					21
	Undergraduate goals: Help students evaluate the quality and reliability of information					21
Criterion 3c.						
An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.	Perceived growth: Critical thinking skills		2			
	Perceived growth: Problem-solving skills		2		2	
	That your courses inspired you to think in new ways		5			
	Rate yourself: Risk-taking		8		17	
	Rate yourself: Creativity	41	8		17	
	Tolerance of others with different beliefs	31	11	6	19	
	Openness to having my own views challenged	31	11	6	19	
	Integrate skills and knowledge from different sources and experiences	33	17	18	13	18
	How often: Apply/ied concepts from courses to everyday life/real life situations		23	12	16	
	How often: Worked on independent study projects				7	
	Participated in an undergraduate research program (e.g., MARC, MBRS, REU)				8	
	Completed a culminating experience for your degree (e.g., capstone course/project, thesis, comp exam)				8	
	Received from your professor: An opportunity to apply classroom learning to "real life" issues				24	
	Received from your professor: An opportunity to work on a research project				24	
	To get training for a specific career	38				
	Importance: Adopting "green" practices to protect the environment	45				
	Engaged in academic research that spans multiple disciplines					10
	Taught a capstone course					10
	Supervised an undergraduate thesis					10
	Instructional techniques/methods: Using real-life problems					19
	Undergraduate goals: Develop ability to think critically					21
	Undergraduate goals: Prepare students for employment after college					21
	Undergraduate goals: Develop creative capacities					21
	Undergraduate goals: Help students evaluate the quality and reliability of information					21
	Undergraduate goals: Teach students tolerance and respect for different beliefs					21
Criterion 3d.						
An ability to function on multidisciplinary teams.	Perceived growth: Ability to work as part of a team		2			
	Perceived growth: Leadership ability		2		2	
	Rate yourself: Competitiveness	41	8			
	Rate yourself: Cooperativeness	41	8		17	
	Rate yourself: Leadership ability	41	8		17	
	Ability to work cooperatively with diverse people	31	11	6	19	
	How often: Studied with other students	30	12		7	
	How often: Perfomed community service as part of a class	30	12		7	

Criterion 3d, Cont.	Item	TFS	YFCY	DLE	CSS	FAC
	How often: Performed volunteer work		12			
	I have effectively led a group to a common purpose		14		18	
	Experiences with other racial/ethnic groups: Studied or prepared for class		20			
	Participated in leadership training		22	26	8	
	Been a leader in an organization		22		8	
	How often: Discussed course content with students outside of class		23			
	How often: Worked with classmates on group projects: During class		23		7	
	How often: Worked with classmates on group projects: Outside of class		23		7	
	How often: Participated in study groups			7		
	Instructors: Encourage students from diverse backgrounds to work together			CC		
	How many courses involve: Group projects			CC		
	Participated in an undergraduate research program (e.g., MARC, MBRS, REU)				8	
	Completed a culminating experience for your degree (e.g., capstone course/project, thesis, comp exam)				8	
	Participated in: Student government				8	
	Work with other students on group projects	33				
	Advised student groups involved in service/volunteer work					10
	Evaluation methods: Student evaluations of each others' work					19
	Instructional techniques/methods: Cooperative learning (small groups)					19
	Instructional techniques/methods: Group projects					19
	Instructional techniques/methods: Community service as part of coursework					19
	Institutional priority: To facilitate student involvement in community service					30
	Institutional priority: To provide resources for faculty to engage in community-based teaching or research					30
	Institutional priority: To create and sustain partnerships with surrounding communities					30
	Institutional priority: To develop leadership ability among students					30
Criterion 3e.						
An ability to identify, formulate, and solve engineering problems.	Perceived growth: Critical thinking skills		2			
	Perceived growth: Ability to conduct research		2			
	Perceived growth: Problem-solving skills		2		2	
	Support your opinions with a logical argument	33	17	18	13	18
	Seek solutions to problems and explain them to others	33	17	18	13	18
	Evaluate the quality or reliability of information you received	33	17	18	13	18
	Integrate skills and knowledge from different sources and experiences	33	17	18	13	18
	How often: Apply/ied concepts from courses to everyday life/real life situations		23	12	16	
	How often: Worked on a professor's research project		23			
	How often: Use different points of view to make an argument			12		
	Seek alternative solutions to a problem			18		
	How often: Worked on independent study projects				7	
	Participated in an undergraduate research program (e.g., MARC, MBRS, REU)				8	

Criterion 3e, Cont.	Item	TFS	YFCY	DLE	CSS	FAC
	Completed a culminating experience for your degree (e.g., capstone course/project, thesis, comp exam)				8	
	Received from your professor: An opportunity to work on a research project				24	
	Received from your professor: An opportunity to apply classroom learning to "real life" issues				24	
	To gain a general education and appreciation of ideas	38				
	Engaged in academic research that spans multiple disciplines					10
	Taught a capstone course					10
	Supervised an undergraduate thesis					10
	Instructional techniques/methods: Reflective writing/journaling					19
	Instructional techniques/methods: Using real-life problems					19
	Undergraduate goals: Develop ability to think critically					21
	Undergraduate goals: Prepare students for employment after college					21
	Undergraduate goals: Help students evaluate the quality and reliability of information					21
Criterion 3f.						
An understanding of professional and ethical responsibility.	Perceived growth: Understanding of the problems facing your community		2			
	Perceived growth: Understanding of national issues		2		2	
	Perceived growth: Understanding of global issues		2		2	
	That your courses inspired you to think in new ways		5			
	Rate yourself: Self-understanding	41	8		17	
	Ability to discuss and negotiate controversial issues	31	11	6	19	
	Tolerance of others with different beliefs		11	6	19	
	Openness to having my own views challenged		11	6	19	
	Ability to see the world from someone else's perspective		11	6	19	
	How often: Asked a professor for advice after class		12			
	Take a risk because you feel you have more to gain	33	17	18	13	18
	Accept mistakes as part of the learning process	33	17	18	13	18
	Importance: Developing a meaningful philosophy of life	45	19		23	20
	How often: Feel challenged to think more broadly about an issue			12		
	How often: Recognize the biases that affect your own thinking			12		
	How often: Critically evaluated your own position on an issue			12		
	It is hard to listen to points of view that challenge my values			IGR		
	Instructors: Teach students tolerance and respect for different beliefs			CC		
	Undergraduate goals: Prepare students for employment after college					21
	Undergraduate goals: Develop moral character					21
	Undergraduate goals: Help students develop personal values					21
	Undergraduate goals: Enhance students' self-understanding					21
	Undergraduate goals: Instill in students a commitment to community service					21
	Undergraduate goals: Engage students in civil discourse around controversial issues					21
	Undergraduate goals: Teach students tolerance and respect for different beliefs					21

Criterion 3g.						
An ability to communicate effectively.	Rate yourself: Public speaking ability	41	8		17	
	Rate yourself: Writing ability	41	8		17	
	Ability to discuss and negotiate controversial issues	31	11	6	19	
	How often: Publicly communicated my opinion about a cause (e.g., blog, email, petition)	30	12	25	7	
	Ask questions in class	33	17	18	13	18
	Support your opinions with a logical argument	33	17	18	13	18
	Seek solutions to problems and explain them to others	33	17	18	13	18
	Revise your papers to improve your writing	33	17	18	13	18
	Integrate skills and knowledge from different sources and experiences	33	17	18	13	18
	Importance: Writing original works (poems, novels, etc.)	45	19		23	
	Experiences with other racial/ethnic groups: Had meaningful and honest discussions about race/ethnic relations outside of class		20	9	20	
	Experiences with other racial/ethnic groups: Had intellectual discussions outside of class		20	9		
	Experiences with other racial/ethnic groups: Studied or prepared for class		20			
	How often: Contributed to class discussions		23		7	
	How often: Discussed course content with students outside of class		23	7	7	
	How often: Worked with classmates on group projects: During class		23			
	How often: Worked with classmates on group projects: Outside of class		23			
	How often: Made a presentation in class		23		7	
	How often: Use different points of view to make an argument			12		
	I feel comfortable sharing my own perspectives and experiences in class			CC		
	I don't feel comfortable contributing to class discussions			CC		
	How many courses involve: Class discussions			CC		
	How many courses involve: Student presentations			CC		
	How many courses involve: Multiple short papers			CC		
	How many courses involve: One or more research papers of 10+ pages			CC		
	How many courses involve: Multiple drafts of written work			CC		
	Improve my English reading, writing, or speaking skills			TR2		
	Perceived growth: Foreign language ability				2	
	Perceived growth: Interpersonal skills				2	
	How often: Challenged a professor's ideas in class				7	
	How often: Took a class that required one or more 10+ page papers				7	
	How often: Took a class that required multiple short papers				7	
	Communicate/d regularly with your professors	46			7	
	Work with other students on group projects	33				
	Evaluation methods: Student presentations					19
	Evaluation methods: Term/research papers					19
	Instructional techniques/methods: Class discussions					19
	Instructional techniques/methods: Recitals/Demonstrations					19
	Instructional techniques/methods: Reflective writing/journaling					19
	Instructional techniques/methods: Multiple drafts of written work					19
	Undergraduate goals: Promote ability to write effectively					21

Criterion 3g, Cont.	Item	TFS	YFCY	DLE	CSS	FAC
	Undergraduate goals: Engage students in civil discourse around controversial issues					21
Criterion 3h.						
The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.	Perceived growth: Knowledge of people from different races/cultures		2		2	
	Perceived growth: General knowledge		2		2	
	Perceived growth: Understanding of the problems facing your community		2		2	
	Perceived growth: Understanding of national issues		2		2	
	Perceived growth: Understanding of global issues		2		2	
	Rate yourself: Understanding of others	41	8		17	
	Ability to see the world from someone else's perspective	31	11	6	19	
	Tolerance of others with different beliefs	31	11	6	19	
	Openness to having my own views challenged	31	11	6	19	
	How often: Socialized with someone of another racial/ethnic group	30	12			
	How often: Performed volunteer work		12			
	My college experiences have exposed me to diverse opinions, cultures, and values		14			
	Importance: Improving my understanding of other countries and cultures	45	19		23	
	Importance: Developing a meaningful philosophy of life	45	19		23	20
	Experiences with other racial/ethnic groups: Had meaningful and honest discussions about race/ethnic relations outside of class		20	9	20	
	Have/had a roommate of a different ethnicity	46	22		8	
	How often: Apply/ied concepts from courses to everyday life/real life situations		23	12	16	
	Interact with someone: From a country other than your own			11		
	Interact with someone: From a religion different from your own			11		
	Interact with someone: From a socioeconomic class different from your own			11		
	Interact with someone: Of a sexual orientation different from your own			11		
	Interact with someone: With a disability			11		
	Instructors: Encourage students to contribute different perspectives in class			CC		
	Instructors: Include diverse perspectives in class			CC		
	Perceived growth: Ability to get along with people of different races/cultures				2	
	Taken an ethnic studies course				8	
	Taken a women's studies course				8	
	Attended a racial/cultural awareness workshop				8	
	Participate in a study abroad program	46			8	
	I am interested in seeking information about current social and political issues				18	
	To gain a general education and appreciation of ideas	38				
	To make me a more cultured person	38				
	To get training for a specific career	38				
	To prepare myself for graduate or professional school	38				
	Importance: Adopting "green" practices to protect the environment	45				
	Socialize with someone of another racial/ethnic group	46				
	Engaged in academic research that spans multiple disciplines					10

Criterion 3h, Cont.	Item	TFS	YFCY	DLE	CSS	FAC
	Instructional techniques/methods: Using real-life problems					19
	Undergraduate goals: Prepare students for employment after college					21
	Undergraduate goals: Help students develop personal values					21
	Undergraduate goals: Instill in students a commitment to community					21
	Undergraduate goals: Enhance students' knowledge of and appreciation for other racial/ethnic groups					21
	Undergraduate goals: Teach students tolerance and respect for different beliefs					21
	Institutional priority: To help students learn how to bring about change in society					30
	Institutional priority: To develop an appreciation for multiculturalism					30
Criterion 3i.						
A recognition of the need for, and an ability to engage in life-long learning.	Perceived growth: General knowledge		2		2	
	Perceived growth: Understanding of the problems facing your community		2		2	
	Perceived growth: Understanding of national issues		2		2	
	Perceived growth: Understanding of global issues		2		2	
	Rate yourself: Academic ability	41	8	16	17	
	Ability to see the world from someone else's perspective	31	11			
	Tolerance of others with different beliefs	31	11	6	19	
	Openness to having my own views challenged	31	11	6	19	
	Ability to discuss and negotiate controversial issues	31	11	6	19	
	Ability to work cooperatively with diverse people	31	11	6	19	
	My college experiences have exposed me to diverse opinions, cultures, and values		14			
	Look up scientific research articles and resources	33	17	18	13	18
	Explore topics on your own, even though it was not required for a class	33	17	18	13	18
	Accept mistakes as part of the learning process	33	17	18	13	18
	Integrate skills and knowledge from different sources and experiences	33	17	18	13	18
	How often: Critically evaluated your own position on an issue			12		
	Perceived growth: Preparedness for graduate or advanced education				2	
	To learn more about things that interest me	38				
	Engaged in academic research that spans multiple disciplines					10
	Undergraduate goals: Help students evaluate the quality and reliability of information					21
Criterion 3j.						
A knowledge of contemporary issues.	How often: Worked on a local, state, or national political campaign	30	12	25	16	
	I am interested in seeking information about current social and political issues		14	5	18	
	Satisfaction: Relevance of coursework to everyday life		15		15	
	Importance: Keeping up to date with political affairs	45	19	10	23	20
	How often: Apply/ied concepts from courses to everyday life/real life situations		23	12	16	
	How often: Helped raise money for a cause or campaign			25	7	
	How often: Discussed politics			25		
	Received from your professor: An opportunity to apply classroom learning to "real life" issues				24	
	Undergraduate goals: Help students develop personal values					21

Criterion 3k.						
An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.	Perceived growth: Critical thinking skills		2		2	
	Perceived growth: Problem-solving skills		2		2	
	Perceived growth: Ability to conduct research		2			
	That your courses inspired you to think in new ways		5			
	Rate yourself: Mathematical ability	41	8	16	17	
	Integrate skills and knowledge from different sources and experiences	33	17	18	13	18
	Rate yourself: Computer skills	41	8		17	
	Manage your/my time effectively		9	TR4		
	Satisfaction: Relevance of coursework to future career plans		15		15	
	Importance: Becoming an authority in my field	45	19		23	20
	Importance: Becoming successful in a business of my own	45	19			
	How often: Worked on a professor's research project		23		7	
	How often: Apply/ied concepts from courses to everyday life/real life situations		23	12	16	
	Joined a club or organization related to your major			26		
	Perceived growth: Manage your time effectively				2	
	Perceived growth: Preparedness for employment after college				2	
	Participated in an undergraduate research program (e.g., MARC, MBRS, REU)				8	
	Completed a culminating experience for your degree (e.g., capstone course/project, thesis, comp exam)				8	
	Participated in: An internship program				8	
	Received from your professor: An opportunity to apply classroom learning to "real life" issues				24	
	Received from your professor: An opportunity to publish				24	
	To get training for a specific career	38				
	To prepare myself for graduate or professional school	38				
	Collaborated with the local community in research/teaching					10
	Conducted research or writing focused on: International/global issues					10
	Engaged undergraduates on <u>your</u> research project					10
	Worked with undergraduates on a research project					10
	Taught a capstone course					10
	Supervised an undergraduate thesis					10
	Received incentives to integrate new technology into your classroom					13
	Instructional techniques/methods: Electronic quizzes with immediate feedback in class					19
	Instructional techniques/methods: Using real-life problems					19
	Undergraduate goals: Prepare students for employment after college					21
	Undergraduate goals: Prepare students for graduate or advanced education					21
	Faculty are rewarded for their efforts to use instructional technology					26

TFS = The Freshman Survey; YFCY = Your First College Year; DLE = Diverse Learning Environments Survey; CSS = College Senior Survey; FAC = The HERI Faculty Survey

The DLE has five modules: TR2 = Climate for Transfer at Two-Year Institutions; TM = Transition to Major; TR4 = Climate for Transfer Students at Four-Year Institutions; IGR = Intergroup Relations; CC = Classroom Climate

The TFS is administered at the beginning of the freshman year; The YFCY is administered at the end of the first year; The DLE is administered during the second and/or third years; The CSS is administered at the end of the senior year; The FAC is administered every three years to faculty.

<u>NOTES:</u>

ABET (Accreditation Board for Engineering and Technology) Criteria for Engineering Programs, 2012

All programs seeking accreditation from the Engineering Accreditation Commission of ABET must demonstrate that they satisfy all of the following General Criteria for Baccalaureate Level Programs.

		Question placement				
Criterion 4. Continuous Improvement	**Item**	**TFS**	**YFCY**	**DLE**	**CSS**	**FAC**
The program must regularly use appropriate, documented processes for assessing and evaluating the extent to which both the program educational objectives and the student outcomes are being attained. The results of these evaluations must be systematically utilized as input for the continuous improvement of the program. Other available information may also be used to assist in the continuous improvement of the program.						

TFS = The Freshman Survey; YFCY = Your First College Year; DLE = Diverse Learning Environments Survey; CSS = College Senior Survey; FAC = The HERI Faculty Survey

The DLE has five modules: TR2 = Climate for Transfer at Two-Year Institutions; TM = Transition to Major; TR4 = Climate for Transfer Students at Four-Year Institutions; IGR = Intergroup Relations; CC = Classroom Climate

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Criterion 5. Curriculum: The curriculum requirements specify subject areas appropriate to engineering but do not prescribe specific courses. The faculty must ensure that the program curriculum devotes adequate attention and time to each component, consistent with the outcomes and objectives of the program and institution. The professional component must include:

		Question placement				
Criterion 5a.	**Item**	**TFS**	**YFCY**	**DLE**	**CSS**	**FAC**
One year of a combination of college level mathematics and basic sciences (some with experimental experience) appropriate to the discipline. Basic sciences are defined as biological, chemical, and physical sciences.	Perceived growth: Ability to conduct research		2			
	How often: Asked a professor for advice after class		12		7	
	Seek solutions to problems and explain them to others	33	17	18	13	18
	Revise your papers to improve your writing	33	17	18	13	18
	Evaluate the quality or reliability of information you received	33	17	18	13	18
	Seek alternative solutions to a problem	33	17	18	13	18
	Look up scientific research articles and resources	33	17	18	13	18
	Seek feedback on your academic work	33	17	18	13	18
	Taken an honors course		22		8	
	Taken a remedial or developmental course		22		8	
	Participated in an academic support program		22			
	How often: Work/ed on a professor's research project	46	23		7	
	Mostly online instruction			19		
	Not been able to get into the classes you need because they were full			20		
	Not been able to take the classes you need because they were not offered/were cancelled			20		
	Courses at another institution: To fulfill degree requirements			23		
	Courses at another institution: To complete my degree quicker			23		
	Courses at another institution: Courses I needed to take were not offered at this college			23		
	Courses at another institution: To take a class to explore my interests			23		
	Courses at another institution: To earn a degree or certificate that is not offered at this college			23		
	Taking a variety of classes from different programs/majors			TM		
	I had expected to get better grades than the grades I have earned so far			TM		
	How many courses involve: Lab work			CC		
	Figure out which courses count towards your goals			TR2		
	Schedule classes for next semester			TR2		
	Complete course pre-requisites for an intended major			TR2		
	How often: Took a class that required one or more 10+ page papers				7	
	How often: Took a class that required multiple short papers				7	
	How often: Made a presentation in class				7	
	Satisfaction: Courses in your major field				15	
	Satisfaction: Class size				15	
	Part-time instructors: Are primarily responsible for introductory classes					2
	Engaged undergraduates on <u>your</u> research project					10
	Worked with undergraduates on a research project					10

Criterion 5a, Cont.	Item	TFS	YFCY	DLE	CSS	FAC
	How many courses are you teaching: Course required for an undergraduate major					11
	Undergraduate goals: Help master knowledge in a discipline					21
	Institutional priority: To promote the intellectual development of students					30
Criterion 5b.						
One and one-half years of engineering topics, consisting of engineering sciences and engineering design appropriate to the student's field of study. The engineering sciences have their roots in mathematics and basic sciences but carry knowledge further toward creative application. These studies provide a bridge between mathematics and basic sciences on the one hand and engineering practice on the other. Engineering design is the process of devising a system, component, or process to meet desired needs. It is a decision-making process (often iterative), in which the basic sciences, mathematics, and the engineering sciences are applied to convert resources optimally to meet these stated needs.	Perceived growth: Knowledge of a particular field or discipline		2		2	
	Perceived growth: Ability to conduct research		2			
	That courses inspired you to think in new ways		5			
	How often: Asked a professor for advice after class		12		7	
	Seek solutions to problems and explain them to others	33	17	18	13	18
	Revise your papers to improve your writing	33	17	18	13	18
	Evaluate the quality or reliability of information you received	33	17	18	13	18
	Seek alternative solutions to a problem	33	17	18	13	18
	Seek feedback on your academic work	33	17	18	13	18
	Integrate skills and knowledge from different sources and experiences	33	17	18	13	18
	Importance: Developing a meaningful philosophy of life	45	19		23	20
	Taken an honors course		22		8	
	Taken a remedial or developmental course		22		8	
	Participated in an academic support program		22			
	How often: Work/ed on a professor's research project	46	23		7	
	Mostly online instruction			19		
	Opportunities to study and serve communities in need (e.g., service learning)			19		
	Courses at another institution: To fulfill degree requirements			23		
	Courses at another institution: To complete my degree quicker			23		
	Courses at another institution: Courses I needed to take were not offered at this college			23		
	Courses at another institution: To take a class to explore my interests			23		
	Courses at another institution: To earn a degree or certificate that is not offered at this college			23		
	Taking a variety of classes from different programs/majors			TM		
	There are too many steps to declare a major here			TM		
	I had expected to get better grades than the grades I have earned so far			TM		
	I am considering changing my major in the future			TM		
	How many courses involve: Lectures (exclusively or almost exclusively)			CC		
	How many courses involve: Class discussions			CC		
	How many courses involve: Student presentations			CC		
	How many courses involve: Multiple short papers			CC		
	How many courses involve: One or more research papers of 10+ pages			CC		
	How many courses involve: Multiple drafts of written work			CC		
	How many courses involve: Group projects			CC		
	How many courses involve: Lab work			CC		
	How many courses involve: Cooperative learning (small groups)			CC		
	How many courses involve: Reflective writing/journaling			CC		

Criterion 5b, Cont.	Item	TFS	YFCY	DLE	CSS	FAC
	How many courses involve: Electronic quizzes with immediate feedback in class (e.g., clickers)			CC		
	Class sections are available in the evening			TR2		
	Figure out which courses count towards your goals			TR2		
	Schedule classes for the next semester			TR2		
	Complete course pre-requisites for an intended major			TR2		
	How often: Took a class that required one or more 10+ page papers				7	
	How often: Took a class that required multiple short papers				7	
	How often: Made a presentation in class				7	
	Satisfaction: Courses in your major field				15	
	Satisfaction: Class size				15	
	Part-time instructors: Are primarily responsible for introductory classes					2
	Taught an interdisciplinary course					10
	Collaborated with the local community in research/teaching					10
	Engaged undergraduates on <u>your</u> research project					10
	Worked with undergraduates on a research project					10
	How many courses are you teaching: Course required for an undergraduate major					11
	Instructional techniques/methods: Class discussions					19
	Instructional techniques/methods: Cooperative learning (small groups)					19
	Instructional techniques/methods: Experiential learning/Field studies					19
	Instructional techniques/methods: Recitals/Demonstrations					19
	Instructional techniques/methods: Group projects					19
	Instructional techniques/methods: Extensive lecturing					19
	Instructional techniques/methods: Multiple drafts of written work					19
	Instructional techniques/methods: Student-selected topics for course content					19
	Instructional techniques/methods: Reflective writing/journaling					19
	Instructional techniques/methods: Community service as part of coursework					19
	Instructional techniques/methods: Using real-life problems					19
	Instructional techniques/methods: Using student inquiry to drive learning					19
	Undergraduate goals: Help master knowledge in a discipline					21
	Institutional priority: To promote the intellectual development of students					30

Criterion 5c.						
A general education component that complements the technical content of the curriculum and is consistent with the program and institution objectives. **Students must be prepared for engineering practice through a curriculum culminating in a major design experience based on the knowledge and skills acquired in earlier course work and incorporating appropriate engineering standards and multiple realistic constraints.** **One year is the lesser of 32 semester hours (or equivalent) or one-fourth of the total credits required for graduation.**	Perceived growth: General knowledge		2		2	
	Satisfaction: General education and core curriculum courses		6			
	Satisfaction: Your overall academic experience		6			
	Satisfaction: First-year programs (e.g., first-year seminar, learning community, linked courses)		6			
	Develop effective study skills		9	TR4		
	Adjust to the academic demands of college		9			
	How often: Asked a professor for advice after class		12			
	Satisfaction: Overall college experience		15			
	Seek solutions to problems and explain them to others	33	17	18	13	18
	Revise your papers to improve your writing	33	17	18	13	18
	Evaluate the quality or reliability of information you received	33	17	18	13	18
	Seek feedback on your academic work	33	17	18	13	18
	Importance: Writing original works (poems, novels, etc.)	45	19		23	
	Importance: Developing a meaningful philosophy of life	45	19		23	20
	Experiences with other racial/ethnic groups: Had intellectual discussions outside of class		20			
	Experiences with other racial/ethnic groups: Studied or prepared for class		20			
	Attending classes/labs		21			
	Studying/homework		21		11	
	Taken an honors course		22			
	Taken a remedial or developmental course		22			
	Enrolled in a formal program where a group of students takes two or more courses together (e.g., FIG, learning community, linked courses)		22			
	Participated in an academic support program		22			
	Taken a course or first-year seminar designed to: Connect faculty and students in focused academic inquiry		22			
	Taken a course or first-year seminar designed to: Help students adjust to college-level academics		22			
	Mostly online instruction			19		
	Opportunities to study and serve communities in need (e.g., service learning)			19		
	Materials/readings about race/ethnicity			19		
	Materials/readings about socioeconomic class differences			19		
	Not been able to get into the classes you need because they were full			20		
	Not been able to take the classes you need because they were not offered/were cancelled			20		
	Courses at another institution: To fulfill degree requirements			23		
	Courses at another institution: To complete my degree quicker			23		
	Courses at another institution: Courses I needed to take were not offered at this college			23		
	Courses at another institution: To take a class to explore my interests			23		
	Courses at another institution: To earn a degree or certificate that is not offered at this college			23		
	Taking a variety of classes from different programs/majors			TM		
	How many courses involve: Lectures (exclusively or almost exclusively)			CC		
	How many courses involve: Class discussions			CC		

Criterion 5c, Cont.	Item	TFS	YFCY	DLE	CSS	FAC
	How many courses involve: Student presentations			CC		
	How many courses involve: Multiple short papers			CC		
	How many courses involve: One or more research papers of 10+ pages			CC		
	How many courses involve: Multiple drafts of written work			CC		
	How many courses involve: Group projects			CC		
	How many courses involve: Lab work			CC		
	How many courses involve: Cooperative learning (small groups)			CC		
	How many courses involve: Reflective writing/journaling			CC		
	How many courses involve: Electronic quizzes with immediate feedback in class (e.g., clickers)			CC		
	Schedule classes for the next semester			TR2		
	Complete course pre-requisites for an intended major			TR2		
	How often: Took a class that required one or more 10+ page papers				7	
	How often: Took a class that required multiple short papers				7	
	How often: Made a presentation in class				7	
	Satisfaction: General education or core curriculum courses				14	
	Satisfaction: Humanities courses				14	
	Satisfaction: Social science courses				14	
	Satisfaction: Class size				15	
	Part-time instructors: Are primarily responsible for introductory classes					2
	Collaborated with the local community in research/teaching					10
	Engaged undergraduates on <u>your</u> research project					10
	Worked with undergraduates on a research project					10
	How many courses are you teaching: General education course					11
	Evaluation methods: Multiple-choice exams					19
	Evaluation methods: Essay exams					19
	Evaluation methods: Short-answer exams					19
	Evaluation methods: Quizzes					19
	Evaluation methods: Weekly essay assignments					19
	Evaluation methods: Student presentations					19
	Evaluation methods: Term/research papers					19
	Evaluation methods: Student evaluations of each others' work					19
	Instructional techniques/methods: Class discussions					19
	Instructional techniques/methods: Cooperative learning (small groups)					19
	Instructional techniques/methods: Experiential learning/Field studies					19
	Instructional techniques/methods: Recitals/Demonstrations					19
	Instructional techniques/methods: Group projects					19
	Instructional techniques/methods: Extensive lecturing					19
	Instructional techniques/methods: Multiple drafts of written work					19
	Instructional techniques/methods: Student-selected topics for course content					19
	Instructional techniques/methods: Reflective writing/journaling					19

Criterion 5c, Cont.	Item	TFS	YFCY	DLE	CSS	FAC
	Instructional techniques/methods: Community service as part of coursework					19
	Instructional techniques/methods: Using real-life problems					19
	Instructional techniques/methods: Using student inquiry to drive learning					19
	Instructional techniques/methods: Experiential learning/Field studies					19
	Institutional priority: To promote the intellectual development of students					30

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The DLE has five modules: TR2 = Climate for Transfer at Two-Year Institutions; TM = Transition to Major; TR4 = Climate for Transfer Students at Four-Year Institutions; IGR = Intergroup Relations; CC = Classroom Climate

The TFS is administered at the beginning of the freshman year; The YFCY is administered at the end of the first year; The DLE is administered during the second and/or third years; The CSS is administered at the end of the senior year; The FAC is administered every three years to faculty.

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		Question placement				
Criterion 6. Faculty	**Item**	**TFS**	**YFCY**	**DLE**	**CSS**	**FAC**
The faculty must be of sufficient number and must have the competencies to cover all of the curricular areas of the program. There must be sufficient faculty to accommodate adequate levels of student-faculty interaction, student advising and counseling, university service activities, professional development, and interactions with industrial and professional practitioners, as well as employers of students. The program faculty must have appropriate qualifications and must have and demonstrate sufficient authority to ensure the proper guidance of the program and to develop and implement processes for the evaluation, assessment, and continuing improvement of the program, its educational objectives and outcomes. The overall competence of the faculty may be judged by such factors as education, diversity of backgrounds, engineering experience, teaching effectiveness and experience, ability to communicate, enthusiasm for developing more effective programs, level of scholarship, participation in professional societies, and licensure as Professional Engineers.	Interacted with: Faculty during office hours		3			
	Interacted with: Faculty outside of class or office hours		3			
	Interacted with: Academic advisors/counselors		3			
	Interacted with: Graduate students/teaching assistants		3			
	That faculty provided me with feedback that helped me assess my progress in class		5			
	That my contributions were valued in class		5			
	That faculty encouraged me to ask questions and participate in discussions		5			
	Satisfaction: Academic advising		6		14	
	How often: Academic advising		7	7		
	Understand what your/my professors expect of you/me academically		9	TR4		
	How often: Was a guest in a professor's/teacher's home	30	12		7	
	How often: Asked a professor/teacher for advice after class	30	12		7	
	Faculty show/ed concern about my progress		14	5	18	
	Faculty empower me to learn here		14	5	18	
	Faculty believe in my potential to succeed academically		14	5	18	
	Staff encouraged me to get involved in campus activities		14		18	
	In class, I have heard faculty express stereotypes based on race/ethnicity, gender, sexual orientation, or religious affiliation		14		18	
	Staff recognize my achievements		14	5	18	
	Faculty encourage/d me to meet with them outside of class		14	5	18	
	At least one faculty member has taken an interest in my development		14	5	18	
	Satisfaction: Amount of contact with faculty		15		15	
	Satisfaction: Racial/ethnic diversity of faculty		15			
	Satisfaction: Overall quality of instruction		15		15	
	Communicate/d regularly with your professors	46	22		7	
	Taken a course or first-year seminar designed to: Connect faculty and students in focused academic inquiry		22			
	How often: Worked on a professor's research project		23		7	
	How often: Received from your professor advice or guidance about your educational program		23		24	
	At least one staff member has taken an interest in my development			5	18	
	How often: Career counseling and advising			7		
	How often: Attended a professor's office hours			7		
	Faculty were able to determine my level of understanding of the course material			21		
	Felt that faculty provided me with feedback that helped me assess my progress in class			21	16	
	Felt that my contributions were valued in class			21	16	
	Felt that faculty encouraged me to ask questions and participate in discussions			21	16	
	Finding a supportive faculty member in the major			TM		
	Talking to a counselor/academic advisor			TM		

Criterion 6, Cont.	Item	TFS	YFCY	DLE	CSS	FAC
	Faculty are approachable			TM		
	The faculty and staff demonstrate a strong commitment to diversity			TM		
	There is high quality teaching			TM		
	Faculty are interested in my development as a student			TM		
	Faculty here take an interest in the success of transfer students			TR4		
	Get to know faculty			TR4		
	Instructors: Encourage students from diverse backgrounds to work together			CC		
	Instructors: Encourage students to contribute different perspectives in class			CC		
	Instructors: Treat all students in class as though they are capable learners			CC		
	Instructors: Include diverse perspectives in class			CC		
	Instructors: Motivated me to work harder than I thought I could			CC		
	Instructors: Are passionate about what they teach			CC		
	Instructors: Teach students tolerance and respect for different beliefs			CC		
	Faculty make transfer a priority at this institution			TR2		
	Faculty and staff understand the academic, cultural, social, and economic needs of students who go here			TR2		
	Discussed my academic goals with faculty			TR2		
	Was encouraged by faculty or staff to participate in an academic summer program linked with a four-year institution			TR2		
	How often: Met with an advisor/counselor about your career plans				7	
	How often: Challenged a professor's ideas in class				7	
	Satisfaction: Career counseling and advising				14	
	Satisfaction: Ability to find a faculty or staff mentor				15	
	Received from your professor: Encouragement to pursue graduate/professional study				24	
	Received from your professor: An opportunity to work on a research project				24	
	Received from your professor: Emotional support and encouragement				24	
	Received from your professor: A letter of recommendation				24	
	Received from your professor: Honest feedback about your skills and abilities				24	
	Received from your professor: Help to improve your study skills				24	
	Received from your professor: Feedback on your academic work (outside of grades)				24	
	Received from your professor: Intellectual challenge and stimulation				24	
	Received from your professor: An opportunity to discuss coursework outside of class				24	
	Received from your professor: Help in achieving your professional goals				24	
	Received from your professor: An opportunity to apply classroom learning to "real life" issues				24	
	Received from your professor: An opportunity to publish				24	
	Taught an interdisciplinary course					10
	Participated in a teaching enhancement workshop					10
	Collaborated with the local community in research/teaching					10
	Engaged undergraduates on <u>your</u> research project					10

Criterion 6, Cont.	Item	TFS	YFCY	DLE	CSS	FAC
	Worked with undergraduates on a research project					10
	Supervised an undergraduate thesis					10
	Published op-ed pieces or editorials					10
	Received funding for your work from: Foundations					10
	Received funding for your work from: State or federal government					10
	Received funding for your work from: Business or industry					10
	Paid workshops outside the institution focused on teaching					13
	Internal grants for research					13
	Training for administrative leadership					13
	Received incentives to develop new courses					13
	Received incentives to integrate new technology into your classroom					13
	Importance: Mentoring the next generation of scholars					20
	Advising and counseling of students					22
	It is easy for students to see faculty outside of regular office hours					26
	Faculty here respect each other					26
	Faculty are rewarded for being good teachers					26
	Faculty are rewarded for their efforts to use instructional technology					26
	Source of stress: Students					27
	Source of stress: Research or publishing demands					27
	Source of stress: Teaching load					27
	Source of stress: Keeping up with information technology					27
	Source of stress: Working with underprepared students					27
	Satisfaction: Teaching load					28
	Satisfaction: Quality of students					28
	Satisfaction: Office/lab space					28
	Satisfaction: Autonomy and independence					28
	Satisfaction: Professional relationships with other faculty					28
	Satisfaction: Departmental leadership					28
	Satisfaction: Course assignments					28
	Satisfaction: Freedom to determine course content					28
	Satisfaction: Overall job satisfaction					28

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NOTES:

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		Question placement				
Criterion 7. Facilities	**Item**	**TFS**	**YFCY**	**DLE**	**CSS**	**FAC**
Classrooms, offices, laboratories, and associated equipment must be adequate to support attainment of the student outcomes and to provide an atmosphere conducive to learning. Modern tools, equipment, computing resources, and laboratories appropriate to the program must be available, accessible, and systematically maintained and upgraded to enable students to attain the student outcomes and to support program needs. Students must be provided appropriate guidance regarding the use of the tools, equipment, computing resources, and laboratories available to the program. The library services and the computing and information infrastructure must be adequate to support the scholarly and professional activities of the students and faculty.	Satisfaction: Classroom facilities		6			
	Satisfaction: Computer facilities/labs		6			
	Satisfaction: Library facilities		6		14	
	Satisfaction: Laboratory facilities and equipment		6		14	
	Satisfaction: Computing assistance		6		14	
	How often: Study skills advising		7	7		
	How often: Writing center		7	7		
	How often: Accessed your campus' library resources electronically		23		7	
	How often: Tutoring or other academic assistance			7		
	How often: Disability resource center			7		
	How often: Used the library for researach or homework				7	
	Satisfaction: Tutoring or other academic assistance				14	
	Satisfaction: Office/lab space					28

TFS = The Freshman Survey; YFCY = Your First College Year; DLE = Diverse Learning Environments Survey; CSS = College Senior Survey; FAC = The HERI Faculty Survey

The DLE has five modules: TR2 = Climate for Transfer at Two-Year Institutions; TM = Transition to Major; TR4 = Climate for Transfer Students at Four-Year Institutions; IGR = Intergroup Relations; CC = Classroom Climate

The TFS is administered at the beginning of the freshman year; The YFCY is administered at the end of the first year; The DLE is administered during the second and/or third years; The CSS is administered at the end of the senior year; The FAC is administered every three years to faculty.

NOTES:

ABET (Accreditation Board for Engineering and Technology) Criteria for Engineering Programs, 2012

All programs seeking accreditation from the Engineering Accreditation Commission of ABET must demonstrate that they satisfy all of the following General Criteria for Baccalaureate Level Programs.

		Question placement				
Criterion 8. Institutional Support	**Item**	**TFS**	**YFCY**	**DLE**	**CSS**	**FAC**
Institutional support and leadership must be adequate to ensure the quality and continuity of the program.						
Resources including institutional services, financial support, and staff (both administrative and technical) provided to the program must be adequate to meet program needs.						
The resources available to the program must be sufficient to attract, retain, and provide for the continued professional development of a qualified faculty. The resources available to the program must be sufficient to acquire, maintain, and operate infrastructures, facilities, and equipment appropriate for the program, and to provide an environment in which student outcomes can be attained.						

TFS = The Freshman Survey; YFCY = Your First College Year; DLE = Diverse Learning Environments Survey; CSS = College Senior Survey; FAC = The HERI Faculty Survey

The DLE has five modules: TR2 = Climate for Transfer at Two-Year Institutions; TM = Transition to Major; TR4 = Climate for Transfer Students at Four-Year Institutions; IGR = Intergroup Relations; CC = Classroom Climate

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