

ABET Committee Meeting Minutes

Date: January 12, 2012
Location: WCH 444
Attendees: D. Cocker, M. Boretz, M. Princevac,
J. Schultz, J. Garay, A. Roy Chowdhury,
C. Ravishankar, R. Abbaschian
Absent: E. Keogh, S. Tan, W. Najjar, D. Kisailus

Power Point charts used in the meeting are attached.

The agenda was:

- Minutes from December 6, 2011 meeting
- Purpose of meetings
- Schedules
- Surveys
- Status of each program
- EAC and CAC differences
- Issues and actions

The minutes of the December 6, 2011 meeting were approved as corrected.

The distinction between the Program Educational Objectives (PEO) and the overall Department Objectives was discussed. It is not necessary for any department to establish a set of objectives other than the PEOs. The purpose of the regular meeting was reviewed. This is summarized below:

- Program status
- Communication
- Schedules and actions
- Sharing information
- Identifying & resolving issues
- Education
- Everyone on same page

The schedule of events and actions for submission of the Self Study Documents by June 30, 2012 was discussed. A critical item is the early outline for the Self Study document and the action was established to provide this outline for each program within the next couple of weeks. The programs will require information from the Dean's office, Student Affairs, EVC office, etc. Action was taken to develop the list of all these requirements some of which are currently in process.

Each program was requested to provide a schedule of events, milestones, and/or actions required to complete its Self Study by June 30. The subject lists in the schedule examples in the Power Point attachment appear to cover the key activities. Each program's detailed schedule may be different but the major milestones should occur at the same time, e.g. completion of the rough draft, mock review, final submission. The schedule would be part of the outline described above.

Preparation for a mock review in April was addressed. We will accept the offer from Dr. Raman Unnikrishnan (Unni), Dean at California State University, Fullerton to provide a talk/working session identifying "do's and don'ts" for an ABET evaluation. He will also provide recommendations for candidates to conduct a mock review for us. Unni has been an ABET evaluator since 1996 and an EAC Commissioner since 2008.

The subject of surveys was addressed. Each program is still working on this aspect. Some programs have developed their own student exit surveys. The common EBI survey is attractive to some and not to others. It was pointed out that EBI data can be analyzed electronically and has data for the last 10 years. However the results must be analyzed using the statistical accuracy limitations of the data. For those planning on using this information can contact Dennis Rice for guidance. The attendees were also reminded that the College has a license with Survey Monkey; if use of this application is desired, please contact Mitch Boretz. There is a common problem of obtaining responses from alumni and employers of our students. This is important because ABET is firm on the issue of participation by constituents.

A summary of each program's status follows.

Mechanical Engineering – M. Princevac

- Course and student files are in good shape
- Surveys of alumni and employers have been done
- Board of Advisors meets every two years and covers ABET issues
- Two concerns from 2006 visit have been corrected
 - More surveys
 - Change assessment not based on grades
- PEOs reviewed by Board of Advisors and are current.
- Need more year by year analysis instead of course by course

Bioengineering – J. Schultz

- Have developed the matrices for a→k outcomes vs courses and content within the course
- Conducted student surveys for past 2 years
- Do not have surveys from alumni or employers (only 30-40 graduates so far).

Material Science and Engineering – J. Garay

- Just became program director and has much catching up required.
- Needs to map a→k outcomes vs curriculum
- Needs to establish a Board of Advisors
- Will need a lot of help from departments participating in the MSE program
- Will need additional assistance from Dean's Office

Electrical Engineering - A. Roy Chowdhury

- Two concerns from 2006 visit have been corrected
 - Revised the PEOs with approval by Board of Advisors
 - Redesigned evaluation procedures so every outcome is mapped to at least one course
- Have conducted student and surveys, prepared course matrix, and as a result of the subsequent evaluation courses were changed
- Last visit indicated that more social context was needed in the senior design project, i.e., more interdisciplinary content.
- Have Board of Advisors meeting every two years
- Will have rough draft of Self Study by end of February
- Need charts from Dean's Office, Student Affairs, other campus offices.

Chemical and Environmental Engineering – David Cocker

- The department ABET team is working well
- Collection of course material is complete except for a few courses due to the significant turnover of faculty
- The end of class survey and class performance will drive the outcome analysis.
- Four alumni surveys were conducted and Facebook is being used as a tool
- Limited number of inputs from employer surveys
- Board of Advisors met in early 2011 – concern over facilities improvements
- Will continue to use the EBI survey in the analysis

Ravi reminded the team that all programs were hit hard on the ethics. EE now requires a small research project on ethics. Ravi suggested the use of the incident@mordes.com video. Mitch suggested a video “Harry’s Daughter” may be useful The Journal of Engineering Ethics was also mentioned as a source.

Mitch took the action to contact the Career Center on employer satisfaction and/or access.

ABET Coordinator Meeting

January 12, 2012

Agenda

- Minutes from 12-11-11
- Purpose of meeting
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Global View of ABET Schedule

Activity/Milestones	2011					2012										2013											
	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O
Begin prep of Self-Study & Collection of student work samples	↑				↑																						
Request for Evaluation						↑																					
Prepare &submit Self-Study										↑																	
ABET selects chairs of evaluation teams								↑		↑																	
Societies select program evaluators								↑		↑																	
Campus visit										↑			↑														
Draft statement received from ABET													↑		↑												
Response to draft statement															↑		↑										
Final statement produced																		↑		↑							
ABET decides accreditation actions																							↑				
ABET notifies of final action																								↑			
ABET posts accredited programs																										↑	

Candidate Actions for Milestone Scheduling

- 1. Complete any surveys.**
- 2. Complete survey analysis, evaluation, and actions taken**
- 3. Publish PEOs on website and in 2012-2013 UCR catalog**
- 4. Develop description of PEO continuous improvement process (including evidence and constituents)**
- 5. Develop a strawman outline of the Self-Study document**
- 6. Develop description of Student Outcomes continuous improvement process (including evidence)**
- 7. Complete draft of Self-Study Document**
- 8. Provide a 2011 transcript for Chancellor's ABET letter**
- 9. Provide 2011 transcripts for Self-Study document and visit**
- 10. Arrange for Board of Advisors meeting if necessary**
- 11. Hold mock review by consultant(s)**
- 12. Identify action plan following review**
- 13. Provide all graphs, photos, diagrams, etc for Self Study**
- 14. Hold faculty meetings to acquaint them with the visit process**
- 15. Hold student meetings to acquaint them with the visit process.**
- 16. Complete final Self-Study.**

Program “X” 2012 ABET Self-study Document Schedule

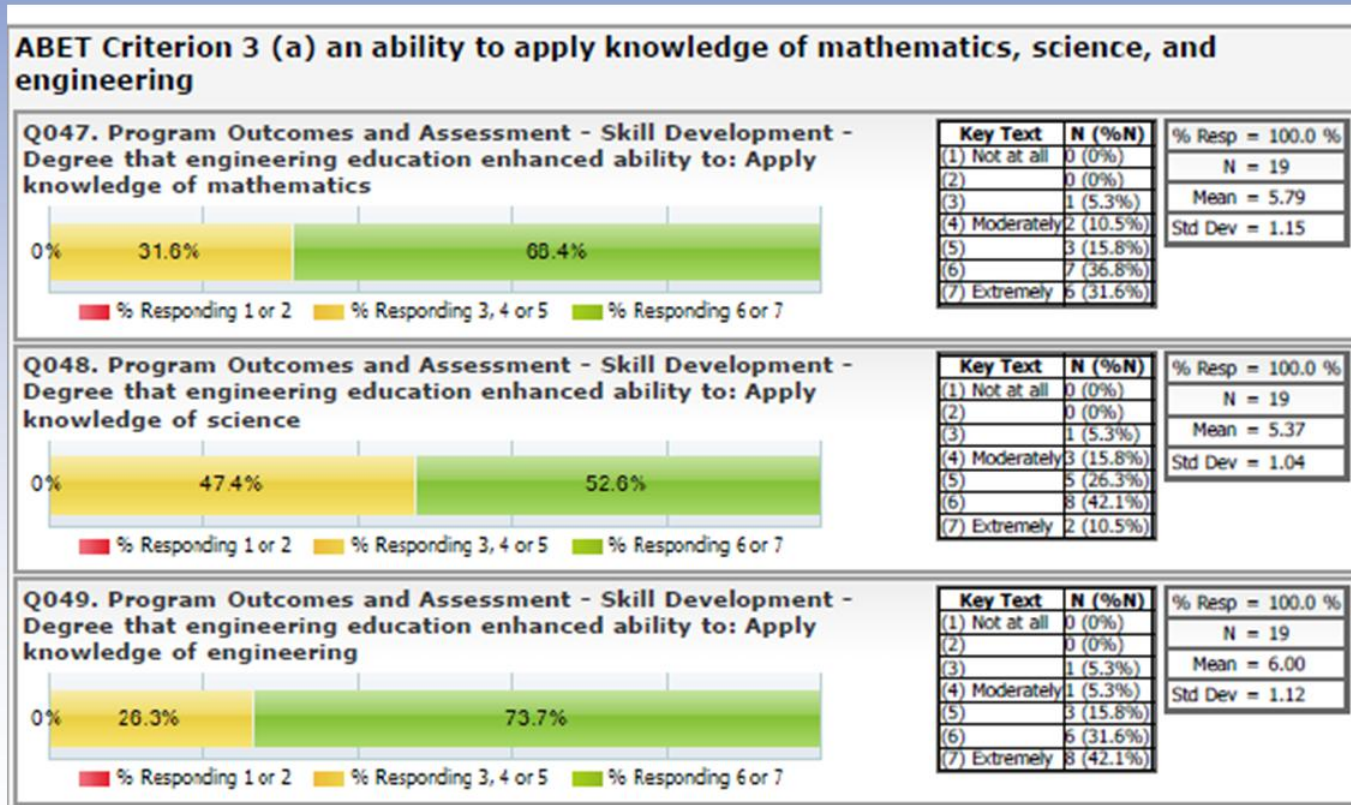
Activity/Milestones	2012					
	J	F	M	A	M	J
Begin prep of Self-Study & Collection of student work samples	↑					
		↑				
			↑			
			↑	↑		
			↑	↑		
				↑	↑	
				↑	↑	
					↑	↑
					↑	↑
						↑
						↑

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		January				February				March				April				May				June			
Task																									
1.	Begin prep of Self-Study -																								
2.	Finalize Collection of student work samples																								
3.	Publish PEOs on website and in 2012-2013 UCR catalog																								
4.	Complete any surveys																								
5.	Complete survey analysis, evaluation, and actions taken																								
6.	Develop description of PEO continuous improvement process (including evidence and constituents)																								
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ABET Criterion 3 (a): The ability to apply knowledge of mathematics, science, and engineering (EBI 2011 Survey)

Electrical Engineering – 2011 assessment → 5.72



Q047. Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Apply knowledge of mathematics

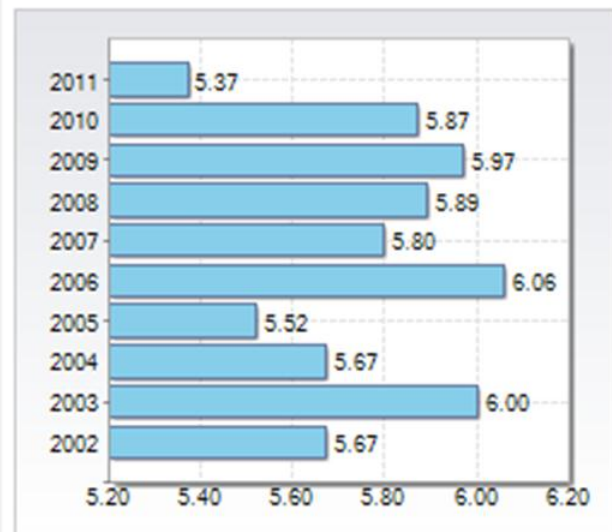
Scale: (1) Not at all, (2), (3), (4) Moderately, (5), (6), (7) Extremely, Not applicable



	N	Mean	Difference	Std Dev
2011	19	5.79	0.00	1.18
2010	38	6.21	-0.42	1.07
		Mean	Difference	
2009		6.00	-0.21	
2008		6.04	-0.25	
2007		5.97	-0.18	
2006		6.19	-0.40	
2005		5.66	0.13	
2004		5.71	0.08	
2003		6.12	-0.33	
2002		6.00	-0.21	

Q048. Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Apply knowledge of science

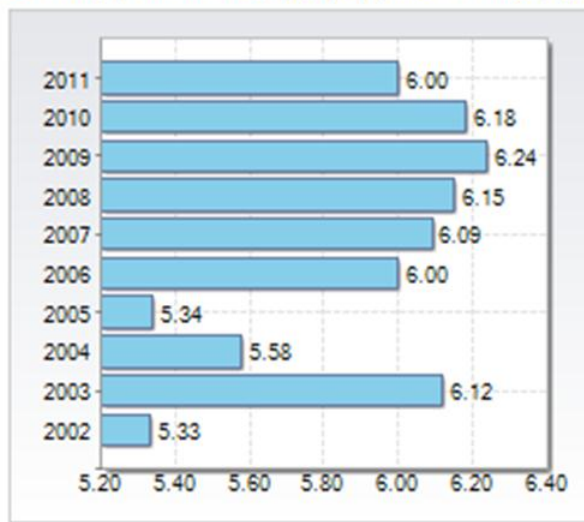
Scale: (1) Not at all, (2), (3), (4) Moderately, (5), (6), (7) Extremely, Not applicable



	N	Mean	Difference	Std Dev
2011	19	5.37	0.00	1.07
2010	38	5.87	-0.50	1.23
		Mean	Difference	
2009		5.97	-0.60	
2008		5.89	-0.52	
2007		5.80	-0.43	
2006		6.06	-0.69	
2005		5.52	-0.15	
2004		5.67	-0.30	
2003		6.00	-0.63	
2002		5.67	-0.30	

Q049. Program Outcomes and Assessment - Skill Development - Degree that engineering education enhanced ability to: Apply knowledge of engineering

Scale: (1) Not at all, (2), (3), (4) Moderately, (5), (6), (7) Extremely, Not applicable



	N	Mean	Difference	Std Dev
2011	19	6.00	0.00	1.15
2010	38	6.18	-0.18	0.93

	Mean	Difference
2009	6.24	-0.24
2008	6.15	-0.15
2007	6.09	-0.09
2006	6.00	0.00
2005	5.34	0.66
2004	5.58	0.42
2003	6.12	-0.12
2002	5.33	0.67

ABET Criterion 3(a) an ability to apply knowledge of mathematics, science, and engineering

EBI 2011 Survey Electrical Engineering



Score	Rating
1	Not at all
2	
3	
4	Moderately
5	
6	
7	Extremely

- **Observations**

- _____
- _____

- **Evaluation**

- _____
- _____

- **Conclusions**

- _____
- _____