

COMMISSION SUMMIT PLENARY SESSION

Louisville, KY
October 29, 2008



*Leadership and Quality Assurance in Applied Science,
Computing, Engineering, and Technology Education*

Session Agenda

- Welcome – Skip Fletcher, ABET President
- Remarks – Joe Sussman, ABET President-Elect
- Intro of Commission Leadership – Dennis George, Session Moderator
- Preparing an Effective Self-Study – Dennis George, Gayle Yaverbaum, Charles McGlothlin, Mohammad Zahraee, Jack Rutherford



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Summit Welcome

- Skip Fletcher, ABET President
- Joe Sussman, ABET President-Elect



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Active Participation

ABET's focus is quality improvement...

- Dialogue
- Question
- Feedback



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Commission Leadership

- Applied Science – Charles McGlothlin, Chair-Elect
- Computing – Gayle Yaverbaum, Chair
- Engineering – Jack Rutherford, Chair
- Technology – Mohammad Zahraee, Chair

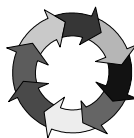


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Preparing an Effective Self-Study



Dennis George
Summit Moderator



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Preparing an Effective Self-Study

- Goal
 - To facilitate preparation of the self-study by programs preparing for ABET evaluation visits in 2009-10 or later
- Expected outcome
 - Attendees will understand the types of responses expected by teams to various types of questions in the self-study



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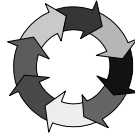
Organization

- Self-Study Basics and Context – Yaverbaum
- Frequently Asked Questions – McGlothlin
- Completing the Institutional Summary – Zahraee
- Completing Program Specific Questions – Rutherford



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Self-Study Basics and Context



Gayle Yaverbaum
CAC Chair



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Self-Study Basics and Context

- Presents program to the evaluation team
- Informs team of elements of the program as they relate to the criteria
- Affords team **FIRST IMPRESSION** of the extent to which program meets criteria
- Gives an impression of the institution's preparation for the upcoming visit



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Audience for the Self-Study

- Team Chair
- Program Evaluator(s)



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Audience for the Self-Study

- Team Chair
 - Overall team manager
 - Typically responsible for institutional issues
 - Responsible for overall report and presentation to commission
 - Experienced evaluator, but maybe not in specific discipline



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Audience for the Self-Study

- Program Evaluator(s)
 - Trained both by ABET and member society
 - Concerned with both general and program-specific details
 - Coordinates findings with other PEVs on team and team chair for consistent and appropriate interpretation relative to the criteria
 - Expertise in specific discipline
 - ABET experience varies



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Tips to Connect with Your Audience

- Make it easy for the reader to find information
 - Good table of contents
 - To-the-point responses
 - Pointers to documents or other sections as appropriate
- Clearly explain institution or program specific jargon
- OK to use disciplinary jargon
- Best to utilize ABET definitions
- Footnote if not sure what response is expected, to explain your interpretation



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How is the Self-Study Organized?

- In concert with the criteria
 - Students
 - Program Educational Objectives
 - Program Outcomes
 - Continuous Improvement
 - Curriculum
 - Faculty
 - Facilities
 - Support
 - Program Criteria (as applicable)



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Types of Responses

- Narrative explanations
- Tables and figures
- Appendices (vitae, course descriptions, institutional summary)



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Differences Across Commissions

- No difference in institutional tables required in the appendix
- Other differences reduced through harmonization of criteria categories
- Further harmonization in process to word common criteria identically when possible



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Preparation Process Tips

- Due July 1 of year of visit
- Template posted on ABET website July of year prior to visit
- Appoint leader of document preparation early in fall prior to year of visit.
- Assessment should be a regular process.
- Assign tasks to key persons at program, college, and institutional level as appropriate.
- Synthesize materials into coherent whole.
- Leave time for review before due date.
- ABET HQ staff will help as questions arise.



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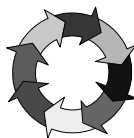
Self-Study Presentation

- Typically has been paper
- ABET now accepts a self-study on CD or DVD
- Self-study to all members of the team



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Frequently Asked Questions



Charles McGlothlin
ASAC Chair-Elect



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Frequently Asked Questions

- By the Self-Study Writer
- By the Program Chair
- By the Dean
- By the Chief Operating Officer



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How Do I Start?

- Get a copy of the self-study questionnaire for the appropriate commission(s).
 - It is a guided tour of what you will want to put into the report.
 - It can be used as a check list.
 - It is not intended to be limiting.



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Am I Required to Follow the Format of the Self-Study Questionnaire?

- No, but it is a very rational outline.
- The reader expects to see your self-study report developed more-or-less in this manner.
- Be sure to include all items that appear in the self-study questionnaire *Table of Contents*.



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What About Figures and Tables?

- Don't change the format without a good reason.
- Feel free to include additional tables and/or figures to make your self-study more understandable to the primary reader, your program evaluator.
- The objectives are content (numbers, facts, and trends) and clear communication.



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What is the Time Period For My Self-Study?

- The self-study should reflect the academic year in which it is produced and submitted.
- Assessment results and analyses probably will go back several years.
- Upcoming changes to the program should be mentioned, particularly if they will be effective by the time of the visit.



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We Made Major Changes in the Program Recently. What Do We Do (No New Data)?

- Great! You identified through your program of continuous improvement that change was needed to achieve objectives and/or outcomes.
- Describe what led to the changes and when the impact of the changes will be determined.



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**We thought we were
ready for accreditation
or reaccreditation, but the
self-study questionnaire
demonstrates that we need
another year of preparation.**

What Do We Do?

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Seek the advice of Maryanne Weiss
at ABET headquarters right away.
Do not wait until the last minute.
Several alternative solutions may
be available to your problem.

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What Are the Visitors Really Looking For?

- A demonstration that your program meets the criteria.
- Continuous improvement is an ongoing process. The visiting team is looking over the program's shoulder at that ongoing process to determine whether that process is being applied continuously and not just before the self-study report must be prepared.



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Common Mistakes Reporting Assessment Information

- Too many data, not enough information.
 - Reporting numbers or percentages without putting them into context.
 - How many students/graduates in cohort
 - How many students/graduates provided data
- Not describing how the data are evaluated.
- Using very complex charts describing your assessment processes.



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Common Mistakes Reporting Assessment Information (cont.)

- Discussing all outcomes/objectives at once instead of one at a time.
- Using the terms “objectives” and “outcomes” interchangeably.
- Referencing the outcomes/objectives by numbers or letters that refer back to a chart. Don't require the reader to go back in the self-study for the reference.



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Closing Thoughts

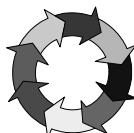
- Have someone who knows nothing about your program read your report. If they don't understand it, chances are neither will the visiting team.
- There is elegance in simplicity.



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Self-Study Questionnaire

Institutional Summary Appendix



Mohammad Zahraee
TAC Chair



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For Guidance Only

The institution may employ any means it chooses to represent its assessment and evaluation processes to the visiting team.

Consequently, the references to specific processes in the following are for guidance only.

The information may be presented in any manner the institution chooses.



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Institutional Information

- The Institution
- Type of Control
- History of Institution
- Student Body
- Accreditation
- Personnel & Policies
- Educational Unit
- Credit Unit
- Instructional Modes
- Grade-Point Average
- Academic Supporting Units
- Faculty Workload



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Table 1. Programs Offered by the Educational Unit

Program Title ¹	Modes Offered ²				Nominal Years to Complete	Administrative Head	Administrative Unit or Units (e.g. Dept.) Exercising Budgetary Control	Submitted for Evaluation ³		Offered, Not Submitted for Evaluation ⁴	
	Day	Co-op	Off Campus	Alternate Mode				Now Accredited.	Not Now Accredited	Now Accredited	Not Now Accredited
Mechanical Engineering Technology	X				4	M. E. Tec	School of Technology	X			
Mechanical Engineering Technology	X	X			5	M. E. Tec	School of Technology	X			
Electronics Engineering Technology	X				2	S. M. Conductor	School of Technology			X	



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Table 2. Degrees Awarded and Transcript Designations by Educational Unit

Program Title ¹	Modes Offered ²				Name of Degree Awarded ³	Designation on Transcript ⁴
	Day	Co-op	Off Campus	Alternative Mode		
Mechanical Engineering Technology	X				Bachelor of Science	Bachelor of Science in Mechanical Technology
Mechanical Engineering Technology	X	X			Bachelor of Science	Bachelor of Science in Mechanical Engineering Technology
Electronics Engineering Technology	X				Associate of Science	Associate of Science

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**Table 3a. Support Expenditures
School of Technology**

Fiscal Year	07 - 08	08 - 09 Current year (estimate)	09 - 10 Next Year (budgeted)
Expenditure Category			
Operations (not including staff) ⁴	\$414, 679	\$400,647	\$466,432
Travel ⁵	\$66425	\$69299	\$58800
Equipment ⁶			
(a) Institutional Funds	\$110,560	\$40600	\$202160
(b) Grants and Gifts ⁷	\$912218	\$280674	\$484975
Graduate Teaching Assistants	0	0	0
Part-time Assistance ⁸ (other than teaching)	0	0	0
Faculty Salaries	\$1,705,000	\$1,905,000	\$2,100,000

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Table 3b. Support Expenditures
Mechanical Engineering Technology Program (A.S. & B.S.)

Fiscal Year	07 - 08	08 - 09 Current year (estimate)	09 - 10 Next year (budgeted)
Expenditure Category			
Operations (not including staff) ⁴	\$171,141	\$130,720	\$141,800
Travel ⁵	\$30881	\$34162	\$40701
Equipment ⁶			
(a) Institutional Funds	\$3234	\$27200	\$10,526
(b) Grants and Gifts ⁷	\$720,050	\$162,017	\$406,320
Graduate Teaching Assistants	0	0	0
Part-time Assistance ⁸ (other than teaching)	0	0	0
Faculty Salaries	\$340,000	\$381,000	\$420,000

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Table 4a. Personnel and Students
School of Technology (Fall 2008)

	Headcount		FTE	Ratio to Faculty
	FT	PT		
Administrative ⁴	5	0	5.0	
Faculty (tenure-track)	24	3	25.0	
Other Faculty (excluding Student Assistants)	0	0	0	
Student Teaching Assistants	0	0	0	0
Student Research Assistants	0	0	0	0
Technicians/Specialists	2	1	2.5	0.1
Office/Clerical Employees	3	0	3.0	0.12
Others ⁵	0	0	0	0
Undergraduate Student enrollment ⁶	600	150	700	28.0
Graduate Student enrollment	0	0	0	0

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**Table 4b. Personnel and Students
Mechanical ET Program (Fall 2008)**

	Headcount		FTE	Ratio to Faculty
	FT	PT		
Administrative ⁴	1	0	1.0	
Faculty (tenure-track)	4	2	5.0	
Other Faculty (excluding Student Assistants)	0	0	0	
Student Teaching Assistants	0	0	0	0
Student Research Assistants	0	0	0	0
Technicians/Specialists	1	0	1.0	0.2
Office/Clerical Employees	1	0	1.0	0.2
Others ⁵	0	0	0	0
Undergraduate Student enrollment ⁶	100	0	100	20.0
Graduate Student enrollment	0	0	0	0

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**Table 5a. Program Enrollment and Degree Data
School of Technology**

	Academic Year		Enrollment Year					Total Und Grad	Total Grad	Degrees Conferred			
			1st	2nd	3rd	4th	5th			Bachelor	Master	Doctor	Oth
CURRENT (08-09)	600	FT	180	140	120	100	60	600	0	75	0	0	120
	150	PT	70	30	20	10	20	150	0	15	0	0	20
07 - 08		FT							0		0	0	
		PT							0		0	0	
06 - 07		FT							0		0	0	
		PT							0		0	0	

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**Table 5b. Program Enrollment and Degree Data
Mechanical ET Program**

	Academic Year		Enrollment Year					Total Und Grad	Total Grad	Degrees Conferred			
			1st	2nd	3rd	4th	5th			Bachelor	Master	Doctor	Oth
CURRENT (08-09)	100	FT	35	30	16	14	5	600	0	21	0	0	30
	0	PT	0	0	0	0	0	0	0	0	0	0	0
07 - 08		FT							0		0	0	
		PT							0		0	0	
06 - 07		FT							0		0	0	
		PT							0		0	0	

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**Table 6a. Faculty Salary Data
School of Technology (2008-09)**

	Professor	Associate Professor	Assistant Professor	Instructor
Number	5	10	5	5
High	\$100,000	\$90,000	\$80,000	\$70,000
Mean	\$90,000	\$80,000	\$70,000	\$60,000
Low	\$80,000	\$70,000	\$60,000	\$50,000

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**Table 6b. Faculty Salary Data
Mechanical ET Program (2008-09)**

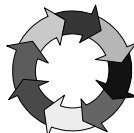
	Professor	Associate Professor	Assistant Professor	Instructor
Number	1	2	1	1
High	\$92,000	\$90,000	\$72,000	\$57,000
Mean	\$92,000	\$80,000	\$72,000	\$57,000
Low	\$92,000	\$70,000	\$72,000	\$57,000

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Self-Study Questionnaire
**Reporting Curriculum and
Faculty Information**



Jack Rutherford
EAC Chair

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Criterion 5. Curriculum

- Curriculum Table (Table 5-1)
- Course and Section Size Summary (Table 5-2)
- Course Syllabi
- Course Material Display
- Prerequisite flow chart (all except applied science)



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Curriculum Table

Year; Semester or Quarter	Course (Department, Number, Title)	Category (Credit Hours)			
		Math & Basic Sciences	Professional Program Topics or Program Core or Program Advanced or Engineering Topics	General Education	Other
		3			
		1.5	1.5		



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“One Year” of Study

Criteria	One Year of Study =
Computing (CAC)	30 semester credits (45 quarter credits)
Engineering (EAC)	32 semester credit hours OR 25% of total credits for degree, whichever is less

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Notes About Curriculum Table

- Options, concentrations, pathways
- Current vs. new curriculum
- Add footnotes if helpful

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Syllabi - Purpose

- Support classification of courses as shown in curriculum table
- Show scope of courses – breadth/depth of topics
- Indicate rigor of courses
- Indicate textbooks or other supporting documents



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Syllabi - Format

- Follow specified outline (specifies minimum required information)
- Common format for all courses
- No more than two pages for each course (engineering and technology)
- 2 or 3 pages for each course (computing)



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Link Between Curriculum and Outcomes

- Explain how the curriculum addresses the program outcomes. Include a table showing how each course contributes to the program outcomes (computing).
- Syllabi include course relationship to outcomes.



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Criterion 6. Faculty

- Summary of faculty activities and responsibilities
- Faculty workload summary (table)
- Faculty analysis (table)
- Faculty resumes



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Criterion 6. Faculty

Summary and Description of

- Composition (including size), credentials, experience, and workload of program faculty
- Teaching, research, and other scholarly activity and performance
- Service activity and performance
- Course and program development and delivery
- Competencies
- Professional development activities and funding
- Process and timeline for ongoing assessment of program faculty (applied science programs only)



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Faculty Analysis Table

- | | |
|---|--|
| <ul style="list-style-type: none"> • Name • Rank • Type of academic appointment: TT, T, NTT • FT or PT • Highest degree and field • Institution from which highest degree earned & year | <ul style="list-style-type: none"> • Years of Experience <ul style="list-style-type: none"> • Govt./industry Practice • Total Faculty • This Institution • Professional registration/certification • Level of activity (high, med, low, none) <ul style="list-style-type: none"> • Professional society • Research • Consulting/summer work in industry |
|---|--|



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Faculty Vitae/ Résumés – Purpose

- Support summary in faculty analysis table
- Show education, experience, recent and current activities, currency in the field
- Help program evaluator identify who to interview



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Faculty Vitae/ Résumés – Format

- Common format for all faculty – include requested information
 - 2-page limit (engineering and technology)
 - Suggested 2-page limit (applied science)
 - 3-page limit (computing)



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Thank You for Your Attention!

Time for Q&A



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