

**UNIVERSITY ASSESSMENT COMMITTEE**  
**Feedback to Academic Departments on Assessment Activities Reported in 2007-08 Annual Reports**

**DEPARTMENT** Electrical Engineering **DATE** 4.13.09

**COMMITTEE MEMBER(S) CONDUCTING REVIEW** Darla Adams & Cassie Gerhardt

**1. STUDENT LEARNING GOALS**

- |                                       |                      |                |                           |
|---------------------------------------|----------------------|----------------|---------------------------|
| • Were any goals referenced?          | YES <u>U &amp; G</u> | NO <u>    </u> | QUALIFIED Y/N <u>    </u> |
| • If so, were goals well articulated? | YES <u>U &amp; G</u> | NO <u>    </u> | QUALIFIED Y/N <u>    </u> |
| • Do goals address student learning?  | YES <u>U &amp; G</u> | NO <u>    </u> | QUALIFIED Y/N <u>    </u> |

**Comments:**

**Undergraduate:** The goals referenced for the undergraduate program are well articulated and include both educational objectives as well as program outcomes. The educational objectives and program outcomes were revised in April 2007 with input from faculty, students, and the Electrical Engineering Advisory Board. The program outcomes are identical to the EAC/ABET outcomes.

**Graduate:** The goals referenced for the graduate program were adopted in spring 2006.

In addition to the Departmental goals, please also consider UND's Institutional and Essential Studies goals for student learning (shown in alignment within parentheses). Use 'U' (undergraduate) or 'G' (graduate) to identify UND/Essential Studies goals which are similar to the referenced departmental goals.

- U    G    1 Communication – written or oral (“able to write and speak in various settings with a sense of purpose/audience”)  
      G    2 Thinking and reasoning – critical thinking (or “be intellectually curious”; analyze, synthesize, evaluate)  
      G    3 Thinking and reasoning – creative thinking (or “be intellectually creative”; explore, discover, engage)  
      U    G    4 Thinking and reasoning – quantitative reasoning (“apply empirical data...analyze graphical information”)  
            5 Information literacy (“be able to access and evaluate...for effective, efficient, and ethical use”)  
            6 Diversity (“demonstrate understanding of diversity and use that understanding...”)  
      U          7 Lifelong learning (“commit themselves to lifelong learning”)  
      U          8 Service/citizenship (“share responsibility both for their communities and for the world”)

**Comments regarding departmental goals and alignment of departmental goals with institutional and Essential Studies goals:**

**Undergraduate:** The goals listed address both Essential Studies goals as well as broader goals specific to students enrolled in the Electrical Engineering program.

**Graduate:** no comments

**2. ASSESSMENT METHODS**

- |  |                      |                |                           |
|--|----------------------|----------------|---------------------------|
| Were any specific assessment methods referenced?   | YES <u>U &amp; G</u> | NO <u>    </u> | QUALIFIED Y/N <u>    </u> |
| • If so, were specifically chosen assessment methods appropriately aligned with individual goals?        | YES <u>U &amp; G</u> | NO <u>    </u> | QUALIFIED Y/N <u>    </u> |
| • Were both direct and indirect assessment methods used as components of a “multiple measures” approach? | YES <u>U &amp; G</u> | NO <u>    </u> | QUALIFIED Y/N <u>    </u> |

**Comments:**

**Undergraduate:** A variety of assessment methods were referenced as well as information regarding the frequency of their use and type (evaluation, direct or indirect). The assessment methods listed provide a thorough approach to assessment as

they appear to engage students at different points in the program and are not just summative data collection methods. It was mentioned in the annual report that the Electrical Engineering Assessment Plan was overhauled, but the departmental assessment plan (posted on the Assessment Committee website) is dated March 2004 and is not in alignment with the updated (April 2007) educational objectives and program outcomes.

**Graduate:** Assessment methods are identified for each of the stated goals. In addition a timeline is noted for the completion of each of the specific assessment methods.

### 3. ASSESSMENT RESULTS

Were any assessment results reported?	YES_U & G__	NO__	QUALIFIED Y/N __
• If so, were the results clear in terms of how they specifically affirm achievement of goals?	YES_U __	NO__	QUALIFIED Y/N _G__
• If so, were the results clear in terms of how they indicate need for improvement?	YES_U & G__	NO__	QUALIFIED Y/N __
• Were the results tied to goals for student learning?	YES_U __	NO__	QUALIFIED Y/N _G__

#### *Comments:*

**Undergraduate:** The reported results show a commitment to assessment on the part of faculty and administrators.

#### **Graduate:**

In addition to departmental goals, some assessment results may be applicable to institutional and Essential Studies goals. Use 'U' (undergraduate) or 'G' (graduate) to identify those results which are applicable to institutional/Essential Studies goal achievement. For indicated items, please describe findings in the appropriate section below. .

- \_U\_\_\_\_\_ 1 Communication – written or oral (“able to write and speak in various settings with a sense of purpose/audience”)  
 \_\_\_\_\_ 2 Thinking and reasoning – critical thinking (or “be intellectually curious”; analyze, synthesize, evaluate)  
 \_\_\_\_\_ 3 Thinking and reasoning – creative thinking (or “be intellectually creative”; explore, discover, engage)  
 \_\_\_\_\_ 4 Thinking and reasoning – quantitative reasoning (“apply empirical data...analyze graphical information”)  
 \_\_\_\_\_ 5 Information literacy (“be able to access and evaluate...for effective, efficient, and ethical use”)  
 \_\_\_\_\_ 6 Diversity (“demonstrate understanding of diversity and use that understanding...”)  
 \_U\_\_\_\_\_ 7 Lifelong learning (“commit themselves to lifelong learning”)  
 \_\_\_\_\_ 8 Service/citizenship (“share responsibility both for their communities and for the world”)

#### *Comments regarding results and the application of results to departmental, institutional and Essential Studies goals:*

**Undergraduate:** The reported assessment results provide results for each of the assessment methods listed in section 2. Most of the reported results relate to survey results from the Alumni Survey and/or the Graduate Seniors Survey. Assessment results from more direct methods should be included.

**Graduate:** The results reported were for graduate student theses completed in FY 2007 as theses completed in FY 2008 were not assessed. Although the assessment results regarding the graduate student theses provides information regarding areas for improvement, the reported results do not relate to the previously stated goals. It appears that assessment of student learning at the graduate level is in the developing stages in comparison to the assessment at the undergraduate level.

### 4. CLOSING THE LOOP

Were any actions taken on the basis of assessment results reported?	YES_U_____	NO__	QUALIFIED Y/N _G__
• If so, do curricular or other improvements/ changes arising from assessment results directly address goals for student learning?	YES_U_____	NO__	QUALIFIED Y/N _G__

**Comments:**

**Undergraduate:** The report addresses both “closing the loop” changes that have been made such as improving lab exercises as well as areas that the department still needs to address based on assessment results.

**Graduate:** At this time, “closing the loop” activities have not occurred at the graduate level. The annual report noted that there is a plan to study the assessment results in order to recommend way to improve supervision of graduate students.

**SUMMARY**

***Strengths***

\_U & G\_ A specific plan for assessment is in place.  
\_U & G\_ Student learning goals are well-articulated.  
\_U & G\_ Assessment methods are clearly described.  
\_U & G\_ Assessment methods are appropriately selected.  
\_U \_\_\_ Assessment methods are well-implemented.  
\_U & G\_ Direct and indirect methods are implemented.  
\_U & G\_ Results are reported.  
\_U \_\_\_ Results are tied to closing the loop.  
(Decision-making is tied to evidence.)

***Areas for Improvement***

\_\_\_ No specific plan for assessment is in place.  
\_\_\_ Student learning goals are not well-articulated.  
\_\_\_ Assessment methods are not clearly described.  
\_\_\_ Assessment methods are not appropriately selected.  
\_G\_ Assessment methods are not well-implemented.  
\_\_\_ A single type of assessment methods predominates.  
\_\_\_ No results are reported.  
\_G\_ Results are not clearly tied to closing the loop.  
(Decision-making is not directly tied to evidence.)

**OVERALL SUMMARY AND RECOMMENDATIONS:**

It appears that the Electrical Engineering Department has worked hard to create a culture of assessment in their program. Overall the program has clearly articulated goals, assessment methods, and plans to utilize assessment methods. As noted in the annual report, additional focus could be made in utilizing the results to “close the loop” at the graduate level.

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Section 1: \_\_Y\_\_    Section 2: \_\_Y\_\_    Section 3: \_\_Y\_\_    Section 4: \_\_Y\_\_

**Coding Key:**

- Y    = yes, this is done appropriately and well
- N    = no, this is not done at all, or it is not done in relationship to student learning
- NA   = no information available
- ?    = action or progress is apparent; however, evidence is lacking that this is completely and appropriately done