I. Background Information

1. College or Division reporting: College of Engineering

Department/Program/Degree:
Electrical and Computer Engineering Ph.D.

2. Name of the program assessment leader filing this report:
Mike Johnson, DGS

3a. Did faculty/staff change any program learning outcomes since the last report (Sept. 2009)?

☐ No
☒ Yes

3b. If yes, list the current program learning outcomes:
1. Demonstrate technical expertise in key areas of Electrical and Computer Engineering
2. Communicate research results to a scientific audience
3. Independently perform quality original research

4. Are the program learning outcomes listed on the program’s web pages?

☐ No
☒ Yes

5. Do students in the program routinely receive copies of the learning outcomes?

☒ No
☐ Yes

6. Do program faculty/staff regularly receive copies of the learning outcomes?

☐ No
☒ Yes

7. Academic programs only: Provide the number of students graduating (receiving a degree) from this program in AY 2009-2010.
1 (defended previous academic year)

II. Reporting on Learning Outcomes Assessed in AY 2009-2010

8a. Please enter the text of the first program learning outcome assessed this year (in 2009-2010).
Demonstrate technical expertise in key areas of Electrical and Computer Engineering
8b. List and describe all of the measures used to assess this learning outcome.
Instructor evaluation in EECE 6010 core course
Instructor evaluation in EECE 6020 core course
(This outcome assessed jointly across MS nonthesis, MS thesis, and PhD students)

8c. Provide the total number of students assessed on each measure for this learning outcome.
EECE 6010: 18 students
EECE 6020: 15 students

8d. Data Table for Learning Outcome 1:

<table>
<thead>
<tr>
<th>Performance Indicators</th>
<th>Below Expectations</th>
<th>Meets Expectations</th>
<th>Exceeds Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>EECE 6010 assessment</td>
<td>3</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>EECE 6020 assessment</td>
<td>2</td>
<td>7</td>
<td>6</td>
</tr>
</tbody>
</table>

9a. Please enter the text of the second program learning outcome assessed this year.
Communicate research results to a scientific audience

9b. List and describe all of the measures you used to assess this learning outcome.
Oral communication rubric completed by committee members at dissertation defense
Written communication rubric, completed by committee members on dissertation approval
Number of students giving conference presentations and publishing scholarly articles

9c. Provide the total number of students assessed on each measure for this learning outcome.
0 PhD students defended 2009-2010, no rubric data
Presentation and publishing statistics accumulated across all current and former PhD students
(since many publications are delayed past graduation before coming out)

9d. Data Table for Learning Outcome 2:

<table>
<thead>
<tr>
<th>Performance Indicators</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td># students pub journal articles</td>
<td>14</td>
</tr>
<tr>
<td># students pub peer-reviewed articles</td>
<td>14</td>
</tr>
<tr>
<td># students w/ non-peer pubs</td>
<td>13</td>
</tr>
</tbody>
</table>

10a. Please enter the text of the third program learning outcome assessed this year.
Independently perform quality original research

10b. List and describe all of the measures you used to assess this learning outcome.
Research strength rubric, completed by committee members at thesis defense
Number of students giving conference presentations and publishing scholarly articles
(pub results already presented under previous outcome)
10c. Provide the total number of students assessed on each measure for this learning outcome. 0 PhD students defended 2009-2010, no rubric data

14. If each one of the program’s learning outcomes were not assessed in AY2009-2010, is the program following a written assessment rotation plan?

☐ No
☒ Yes

III. Use of the Assessment Data

15. Did department or program faculty/staff receive a report of these AY2009-2010 assessment results?

☐ No
☒ Yes

16. Did department or program faculty/staff meet face-to-face to discuss and analyze the AY2009-2010 assessment results?

☐ No
☒ Yes

17. Please describe the conclusions that program faculty/staff reached about student learning based on their analyses of the assessment results for AY2009-2010.

Summary of key assessment results:
• “Dissemination” component of research strength rubric in MS defenses is clearly lowest. That, along with very low publication numbers for MS students (0 students with journal articles, 2 with any peer reviewed pubs) compared to PhD students (14 current and former students with journal articles published this year), suggests we might want to think about how to increase the emphasis on publication or other dissemination of research results for our MS thesis students
• Core course evaluations, exit survey, defense rubrics, all seem to be in reasonable range to get good assessment information (i.e., there are both higher and lower evaluations present), but no patterns yet to indicate specific issues that need to be addressed. Overall assessment results are positive
• Relatively low number of graduates returned exit survey (3 of 12 graduates). Might want to work on methodology for distribution, collection, and reminders (right now just via an email from DGS, so there is implied identifiability)

18. Describe the actions to improve student learning that the program will undertake as a result of the learning assessment data. Be sure to include a time-table to implement the change and identify who is responsible to implement the action. If no actions were adopted, provide the rationale for this decision in the first box (Improvement Action #1).

Improvement Action #1
Improve methodology for distribution and collection of graduate exit surveys.
19. Please list and describe the status of the actions taken by the program faculty to improve learning during AY2009-2010 that were proposed and reported in the academic year 2008-2009 annual program assessment report and/or earlier reports.

<table>
<thead>
<tr>
<th>Program action to improve student learning</th>
<th>Status of action: Developing, Implementing, Implemented, Assessing</th>
<th>Targeted student learning outcome</th>
<th>Year when improvement will be seen in the assessment data.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Not Applicable.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

IV. Brief Program Assessment Report Statements

20a. In 2 to 3 sentences provide an example of the program’s most interesting or important assessment finding that demonstrates the program’s success associated with a program learning outcome.

Analysis of publication records across faculty and PhD students in the department indicates that the majority of our PhD students are already actively participating and publishing in their respective peer-reviewed fields of study.

20b. In 2 to 3 sentences describe an assessment result that indicates an opportunity for improvement and identify the specific actions the program will take to improve student learning.

No negative indicators this year, primarily due to no PhD graduates this academic year yielding limited data.

21. The Department Chair has read and approved the Brief Program Assessment Report Statements in Items 20a and 20b.

☐ No
☒ Yes