ECE PhD: Record of Research Qualifying Exam

Student Name: ______________________________          Student ID: _________________________
(Last Name, First Name)

Admitted Term: ___________________________              Research Area: _______________________

Advisor: ___________________  TQE: □ Passed _____ □ Failed ____ □ Not yet taken. Due on _____

RQE Date: _______________________ (RQE presentation + RQE written research report)

Evaluation: (A minimum of 3 in each category to pass.)

Please use the following scale to evaluate each category.

1 = Poor, 2 = Marginal, 3 = Competent, 4 = Good, 5 = Excellent

_____ Ability to articulate the research problem and its significance.

_____ Ability to critically review the literature.

_____ Understanding of research methods.

_____ Ability to communicate and interpret research results.

Result: □ Pass   □ Fail

Recommendation:

Committee Member Approval:

Name: ____________________________________________  Signature: _____________________________

Committee Chair

______________________________  ______________________________

______________________________  ______________________________

______________________________  ______________________________

Reviewed by: ____________________________

Program Director: Chair of the ECE Department

Please submit form to Jammie Chang (jchangn@gmu.edu)
ECE PhD Student Learning Outcomes Evaluation

Student Name: ___________________________________________

Student ID: ___________________________ Advisor: ___________________________

☐ RQE taken on ________  ☐ Dissertation Proposal Defense on ________  ☐ PhD Dissertation Defense on ________

Please evaluate based on the
Rubric for Assessment of ECE RQE Exams/Doctoral Proposals/Dissertations/Defenses

Each committee member please fills out one evaluation form.

<table>
<thead>
<tr>
<th>Committee Member</th>
<th>SLO 1 (Foundations)</th>
<th>SLO 2 (Critical Thinking)</th>
<th>SLO 3 (Oral Comm.)</th>
<th>SLO 4 (Written Comm.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Please put down Excellent, Competent or Needs improvement under each SLO.

Comments:
ECE PhD Student Learning Outcomes Evaluation

Student Name: _____________________________________________________________________
Last                              First
Student ID: ______________________________   Advisor: ______________________________

☐ RQE taken on ________  ☐ Dissertation Proposal Defense on ________  ☐ PhD Dissertation Defense on ________

Please evaluate based on the Rubric for Assessment of ECE RQE Exams/Doctoral Proposals/Dissertations/Defenses

Each committee member please fills out one evaluation form.

<table>
<thead>
<tr>
<th>Committee Member</th>
<th>SLO 1 (Foundations)</th>
<th>SLO 2 (Critical Thinking)</th>
<th>SLO 3 (Oral Comm.)</th>
<th>SLO 4 (Written Comm.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Please put down Excellent, Competent or Needs improvement under each SLO.

Comments:
ECE PhD Student Learning Outcomes Evaluation

Student Name: ________________________________________  Last  First
Student ID: ______________________________   Advisor: ______________________________

□ RQE taken on ________  □ Dissertation Proposal Defense on ________  □ PhD Dissertation Defense on ________

Please evaluate based on the Rubric for Assessment of ECE RQE Exams/Doctoral Proposals/Dissertations/Defenses

Each committee member please fills out one evaluation form.

<table>
<thead>
<tr>
<th>Committee Member</th>
<th>SLO 1 (Foundations)</th>
<th>SLO 2 (Critical Thinking)</th>
<th>SLO 3 (Oral Comm.)</th>
<th>SLO 4 (Written Comm.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Please put down Excellent, Competent or Needs improvement under each SLO.

Comments:
# Rubric for Assessment of ECE RQE Exams/Doctoral Proposals/Dissertations/Defenses

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Excellent</th>
<th>Competent</th>
<th>Needs improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLO 1 (Foundations)</td>
<td>Student has excellent knowledge of theory in their field and an excellent command of the relevant research methods.</td>
<td>Student has a reasonable knowledge of the theory in their field and can competently discuss and use relevant research methods.</td>
<td>Student’s knowledge of the theory is poor, and they struggle with basic research techniques.</td>
</tr>
<tr>
<td>SLO 2 (Critical Thinking)</td>
<td>Student demonstrates an excellent ability to perform original research. Specifically, the dissertation research demonstrates that the student has the ability to draw conclusions based on bodies of existing work, produce novel research results, and critically evaluate all the results obtained. The research results are highly significant and will have a substantial impact on the field.</td>
<td>Student demonstrates a reasonable ability to perform original research. The dissertation demonstrates that the student has the ability to draw conclusions based on bodies of existing work, produce novel research results, and to critically evaluate most of the results obtained. The research results have reasonable significance and may impact a small number of researchers working on related problems.</td>
<td>Student struggles to perform original research and relies on substantial help from an advisor to draw conclusions based on previous work, develop new research results, and to evaluate their results. The research has little significance for others in the field.</td>
</tr>
<tr>
<td>SLO 3 (Oral Comm.)</td>
<td>Student demonstrates the ability to make excellent presentations. Specifically, they provide excellent explanations of the research project, approach, procedures, and results to an audience not necessarily familiar with the details of the problem. The student conveys the relevance of their results in the context of the field, identifies related open problems, and discusses potential drawbacks to their solution. The presentation includes excellent visual aids that enhance the presentation.</td>
<td>Student demonstrates the ability to make effective presentations. Specifically, they provide reasonable explanations of the research project, approach, procedures, and results appropriate for a technical audience. The student does a reasonable job of explaining the relevance of their results and the relationships to open problems. The presentation includes reasonable visual aids that help to illustrate the results. Their command of English is reasonable.</td>
<td>Student is not able to communicate effectively. The presentation does not explain the project, procedures, results, and relevance clearly. Visual aids are difficult to understand. The student has poor command of English.</td>
</tr>
<tr>
<td>SLO 4 (Written Comm.)</td>
<td>Student demonstrates excellent writing in the discipline. Specifically, the written dissertation is well structured and organized, clearly communicates technical concepts, precisely describes algorithms and procedures, and clearly communicates research results with appropriate discussion of relevance and implications.</td>
<td>Student demonstrates effective writing in the discipline. The written dissertation is reasonably well structured and organized, clearly communicates the majority of technical concepts, describes most algorithms and procedures with sufficient precision, and provides a reasonable description of research results and a discussion of relevance and implications.</td>
<td>The dissertation is poorly written. It is not well organized. Technical concepts are communicated poorly, and descriptions of algorithms/procedures lack the details required to reproduce the work. Results are poorly explained and there is little discussion of the relevance and implications of the work.</td>
</tr>
</tbody>
</table>