

Students Name::

Student's Graduate Program: Mechanical Engineering

## Appendix C. RUBRIC FOR EVALUATING PHD CANDIDACY EXAMINATION

*Committee Members and Students are responsible for being aware of the evaluation rubric in advance of the examination.*

Date of Exam:

Student Name:

Student Number:

PHD Candidacy examination committee members:

Examination Procedure

- Candidate presents a brief (~20 minute) summary of the work
- Examining committee asks at least two rounds of questions. The set of question should address the attributes in this rubric. In particular, questions must assess the candidate's
  - Understanding of the subject matter and associate literature.
  - Breath of knowledge in the relevant areas.
  - Understanding of the fundamental concepts and methodology.
- When questioning is completed, the candidate is asked to leave the room
- Each committee member must complete the attached response sheets **separately and prior to the post-oral discussion**.
- For each attribute that a committee member feels is somewhat or very deficient, a short explanation should be provided. Confidential Comment sections at the bottom of the rubric are provided for explanations.
- The committee conducts post-oral discussion in camera. The discussion and decision of the examining committee should be based on the completed rubrics.
- The committee choose an outcome.

Completed forms are to be treated as **confidential** and are to be **turned in to the graduate program director, not to the student**.

A summary of written comments and overall evaluation from the committee members **will be provided** to the student and advisor/s.

Completed by:

**Students Name:**

**Student's Graduate Program: Mechanical Engineering**

Attribute for Written	Does Not Meet Expectations	Meets Expectations	Exceeds Expectations
Quality of writing	<input type="checkbox"/> Writing is weak <input type="checkbox"/> Numerous grammatical and spelling errors apparent <input type="checkbox"/> Organization is poor <input type="checkbox"/> Documentation is poor	<input type="checkbox"/> Writing is adequate <input type="checkbox"/> Some grammatical and spelling errors apparent <input type="checkbox"/> Organization is acceptable <input type="checkbox"/> Documentation is adequate	<input type="checkbox"/> Writing is high quality <input type="checkbox"/> No grammatical and spelling errors apparent <input type="checkbox"/> Organization is excellent <input type="checkbox"/> Documentation is excellent
Quality of formatting	<input type="checkbox"/> Formatting is inconsistent <input type="checkbox"/> Equations are not clear or not coherent <input type="checkbox"/> Figures are difficult to read or not relevant <input type="checkbox"/> Captions/legends are not clear	<input type="checkbox"/> Formatting is consistent <input type="checkbox"/> Equations are clear and logical <input type="checkbox"/> Figures clear to read and relevant <input type="checkbox"/> Captions/legends are clear	<input type="checkbox"/> Formatting is excellent <input type="checkbox"/> Equations are excellent <input type="checkbox"/> Figures are excellent <input type="checkbox"/> Captions/legends are excellent
Overall assessment	<input type="checkbox"/> Does not meet expectation	<input type="checkbox"/> Meets expectation	<input type="checkbox"/> Exceeds expectation

Confidential Comments:

**Students Name:**

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Attribute for Oral	Does Not Meet Expectations	Meets Expectations	Exceeds Expectations
Quality of presentation	<input type="checkbox"/> Poorly organized <input type="checkbox"/> Poor presentation <input type="checkbox"/> Poor communication skills	<input type="checkbox"/> Clearly organized <input type="checkbox"/> Clear presentation <input type="checkbox"/> Good communication skills	<input type="checkbox"/> Well organized <input type="checkbox"/> Professional presentation <input type="checkbox"/> Excellent communication skills
Overall breadth of knowledge	<input type="checkbox"/> Presentation reveals critical weaknesses in depth of knowledge <input type="checkbox"/> Presentation does not reflect well developed critical thinking <input type="checkbox"/> Presentation is narrow in scope	<input type="checkbox"/> Presentation reveals some depth of knowledge <input type="checkbox"/> Presentation reveals adequate critical thinking skill <input type="checkbox"/> Presentation reveals the ability to draw from broad knowledge	<input type="checkbox"/> Presentation reveals excellent depth of knowledge <input type="checkbox"/> Presentation reveals well developed critical thinking skill <input type="checkbox"/> Presentation reveals the ability to interconnect and extend knowledge from multiple disciplines
Quality of response to questions	<input type="checkbox"/> Responses are incomplete or require prompting <input type="checkbox"/> Arguments are poorly presented <input type="checkbox"/> Respondent exhibits lack of knowledge <input type="checkbox"/> Responses do not meet level of expectation	<input type="checkbox"/> Responses are complete <input type="checkbox"/> Arguments are well presented <input type="checkbox"/> Respondent exhibits adequate knowledge <input type="checkbox"/> Responses meet level of expectation	<input type="checkbox"/> Responses are eloquent <input type="checkbox"/> Arguments are skillfully presented <input type="checkbox"/> Respondent exhibits excellent knowledge <input type="checkbox"/> Responses exceed level of expectation
Overall assessment	<input type="checkbox"/> Does not meet expectation	<input type="checkbox"/> Meets expectation	<input type="checkbox"/> Exceeds expectation

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Attribute for Research	Does Not Meet Expectations	Meets Expectations	Exceeds Expectations
Overall Quality of Science	<input type="checkbox"/> Arguments are incorrect, incoherent or flawed <input type="checkbox"/> Objectives are poorly defined <input type="checkbox"/> Demonstrates rudimentary critical thinking <input type="checkbox"/> Does not reflect understanding of subject matter and associated literature <input type="checkbox"/> Demonstrates poor understanding of theoretical concepts <input type="checkbox"/> Displays limited creativity and insight	<input type="checkbox"/> Arguments are coherent and clear <input type="checkbox"/> Objectives are clear <input type="checkbox"/> Demonstrates adequate critical thinking skills <input type="checkbox"/> Reflects understanding of subject matter and associated literature <input type="checkbox"/> Demonstrates understanding of theoretical concepts <input type="checkbox"/> Displays creativity and insight	<input type="checkbox"/> Arguments are superior <input type="checkbox"/> Objectives are well defined <input type="checkbox"/> Demonstrates mature critical thinking skills <input type="checkbox"/> Exhibits mastery of subject matter and associated literature <input type="checkbox"/> Demonstrates mastery of theoretical concepts <input type="checkbox"/> Displays exceptional creativity and insight
Contribution to discipline	<input type="checkbox"/> Limited evidence of potential discovery <input type="checkbox"/> Limited expansion upon previous research <input type="checkbox"/> Limited potential of theoretical or applied significance	<input type="checkbox"/> Some evidence of potential discovery <input type="checkbox"/> Builds upon previous research <input type="checkbox"/> Reasonable potential of theoretical or applied significance	<input type="checkbox"/> Exceptional evidence of potential discovery <input type="checkbox"/> Greatly extends previous research <input type="checkbox"/> Exceptional potential of theoretical or applied significance
Overall assessment	<input type="checkbox"/> Does not meet expectation	<input type="checkbox"/> Meets expectation	<input type="checkbox"/> Exceeds expectation

Confidential Comments: