

## Doctor of Philosophy in Engineering Program

### Assessment of Student Academic Achievement Objectives - CANDIDACY

This evaluation is to be completed by each member of the student's doctoral dissertation committee, upon completion of the **candidacy exam (research proposal)**. Return copies of this form to the department secretary or the Doctoral Program Director.

Please **circle** the appropriate box in each row.

The objectives are to develop in the student:  <b>Objectives/Criteria for Evaluation</b>	<b>Level of Achievement</b>		
	<b>Exemplary</b>	<b>Satisfactory</b>	<b>Unsatisfactory</b>
1. A deeper, more general, and more fundamental understanding of the principles underlying a particular field of study, as well as those underlying related fields.			
a. Depth of knowledge	Student shows excellent understanding of fundamental principles directly related to the research.	Student shows good understanding of fundamental principles directly related to the research.	Student shows weak understanding of fundamental principles directly related to the research.
b. Breadth of knowledge	Student shows good understanding of related subjects.	Student shows adequate understanding of related subjects.	Student shows weak understanding of related subjects.
2. A familiarity with advanced methods of analysis and synthesis that are more powerful and more generally applicable than those taught at the undergraduate level.	Student is competent in the most advanced techniques needed for research in the field. Student can synthesize and integrate results and relate them to hypotheses.	Student is competent in techniques needed for research in the field. Student can accept or reject hypotheses.	Student is competent in analytical techniques, with little understanding of the principles underlying the techniques. Student has difficulty addressing hypotheses.
3. The ability to independently read and understand the significance and limitations of the relevant literature.	Student actively searches all works directly and indirectly related to the research. Student can identify strengths and limitations of various methods.	Student has read the literature related to the research and understands how the research fits into the literature.	Student has read only some of the literature related to the research.
4. The ability to formulate, initiate, and complete new and innovative research projects that contribute to the advancement of the field.			
a. Impact on advancement of the field	Work has the potential to have a strong impact on the field.	Work has the potential to have an incremental impact on the field.	Work does not have the potential to have an impact on the field.
b. Adequacy of the scope of the research	Work has examined many facets of the research.	Amount of work is adequate.	Amount of work is inadequate.

c. Adequacy of the depth of the research	Work deeply probes the principles behind the problem.	Work addresses the basic questions of the problem.	Work addresses only the surface of the problem.
d. Adequacy of the proposed approach and method for the research goals	Student shows creativity in designing experiments and formulations for the problem.	Student contributes originality to designing experiments and formulations.	The student follows directions from his or her advisor.
5. The ability to communicate effectively in written and oral form.			
a. Quality of the writing style	Written sentences are complete and grammatical, and they flow together easily. Words are chosen for their precise meanings.	Writing is grammatically correct. Paragraphs and sentences may not flow together perfectly.	Writing contains grammatical errors.
b. Organization of the written proposal	Proposal is logically organized and easy to follow.	Proposal organization is clear.	Proposal is poorly organized.
c. Organization of the presentation	Presentation is clear, logical and organized. Listener can follow the line of reasoning. Pacing is correct for the audience.	Listener can follow and understand the presentation.	Presentation is poorly organized. Presentation jumps around from topic to topic.
d. Clarity of language usage	Speaker is comfortable in front of the group and can be heard by all.	Grammatical errors and use of slang are evident. Some sentences may be incomplete.	Speaker is difficult to understand or hear.
e. Ability to answer questions	Student answered questions directly and clearly.	Student answered questions, but with some difficulty.	Student had difficulty understanding questions and answering clearly.
f. Quality of slides	Slides enhance the presentation and are prepared in a professional manner.	Slides are adequate for the presentation.	Slides are inadequate (writing too small, too much or too little information per slide).
6. The ability to conduct application-oriented research of an interdisciplinary nature.			
a. Application-oriented research	Research will have practical applications that are clear.	Research may have practical applications.	The practical application of the proposed research is unclear.
b. Interdisciplinary research	Research will require significant knowledge of, and interaction with, more than one discipline	Research will involve some work or interaction with more than one discipline.	Research will be completely within one discipline.

**To be answered by the research advisor only:**

Have any papers resulting from the proposal work been accepted for publication in a peer-reviewed journal? \_\_\_\_Yes \_\_\_\_No

Does the student have a master's degree? \_\_\_\_Yes \_\_\_\_No