



Chemical Engineering PhD Outcomes Assessment Rubric

To be completed by committee chair in consultation with exam committee.

Student: _____ Degree program/concentration: _____

Date: _____

Outcome	Unacceptable (1)	Marginal (2)	Acceptable (3)	Exceptional (4)	Rating
1) Knowledge of Chemical Engineering fundamentals appropriate for discipline and specialization	No evidence of PhD-level fundamental knowledge in Chemical Engineering.	Rudimentary knowledge of Chemical Engineering exhibited in written document and oral presentation.	Knowledge of Chemical Engineering fundamentals evident in written and oral presentation.	Demonstrates mastery of appropriate fundamentals of Chemical Engineering.	
2) Depth of knowledge in specialization	Only rudimentary knowledge in specialization.	Some knowledge of specialization demonstrated.	Demonstrates appropriate level of knowledge in specialization.	Demonstrates knowledge of specialization comparable to experienced practitioner.	
3) Ability to conduct original and independent research	No evidence of planning and execution of research program.	Some useful research results with some evidence of original work.	Carried out good research program, achieved useful and novel results.	Excellent planning and execution of research program. Excellent results.	
4) Ability to perform critical review of literature in Chemical Engineering and area of specialization	Rudimentary literature review.	Some review of the literature, but little critical evaluation.	Comprehensive review of literature with evidence of critical thinking about further needs for research in this area.	Extensive review of literature with critical evaluation comparable to a review article in literature.	
5) Able to communicate effectively	Dissertation poorly written. Oral exam not well planned or presented. Unable to answer questions.	Dissertation mostly clearly written. Presented main points clearly. Able to answer some but not all of the questions posed by committee.	Well written and well organized dissertation. Well organized and clear presentation. Good ability to answer questions.	Excellent job of writing and organizing dissertation. Well organized talk. Able to respond to questions and facilitate further discussion of results.	
Overall Assessment	Unacceptable (1)	Marginal (2)	Acceptable (3)	Exceptional (4)	

Comments (use back if necessary):

What curricular or process changes can you suggest to improve student performance in these areas (use back if necessary)?

Form to be sent to department/program grad committee and SoE Associate Dean for Academics.