

Research Methods Qualifying Exam Scoring Rubric (06 May 2014)

Outcome*	Fail	Pass	High Pass	Comments
Articulate strengths and weaknesses of research methods in relation to research questions	Student demonstrates one or more conceptual errors about the alignment of research questions with appropriate methods (e.g., fitting an appropriate worldview to a particular question). Student does not articulate the tradeoffs between different research methods.	Student sufficiently describes how research questions align with certain research methods. Student identifies one or more tradeoffs between different research methods.	Student clearly and thoroughly explains how research questions align with appropriate methods. Student clearly articulates the tradeoffs between different research methods.	
Design appropriate studies to answer engineering education research questions	Student demonstrates one or more conceptual gaps with regard to research design.	Student appropriately designs a study to address engineering education research questions, sufficiently identifying aspects of the design (e.g., question, worldview, theory, method, sampling, data collection, analysis plan, limitations).	Student demonstrates strong understanding of how to design a study to address engineering education research questions, clearly explaining and justifying aspects of the design.	
Critique engineering education research designs	Student does not identify appropriate evaluation criteria; demonstrates one or more conceptual errors with regard to quality of research.	Student uses acceptable criteria to describe strengths and weaknesses for the exam question context.	Student demonstrates a nuanced understanding in using criteria to describe strengths and weaknesses within the exam question context.	
Describe scholarly ethics and integrity in the conduct and reporting of human subjects engineering education research	Student omits significant ethical/human subjects considerations or demonstrates misunderstandings in these areas.	Student appropriately considers ethical/human subjects considerations.	Student clearly describes ethical/human subjects considerations through the use of definitions and clear examples of similarities and differences.	

*Not all outcomes may be assessed on each offering of the exam.