Biology MSA Program

Learning Outcomes	Criteria and Evaluation: Please rank from 4 to 1. You can use decimal points. 4 = Outstanding; 3 = Meets Expectations; 2 = Acceptable But Needs Improvement; 1 = Unsatisfactory	Committee assessments			
					Overall
Demonstrates mastery of their discipline in biology	Understands foundational principles in biology (e.g., central dogma, evolution, and basic physiology as pertains to their area of expertise).				
	Understands core principles in specific area of study.				
Identifies and critically analyzes scientific literature	Demonstrates familiarity and a thorough understanding of the relevant scientific literature				
	Able to critically read scientific literature				
Demonstrates familiarity with hypothesis testing and experimental design	Understands rationale for hypothesis/question and how it advances knowledge in the field				
	Explains feasibility, rationale, and best practices of experimental design				
	Explains how possible outcomes will or will not support the hypothesis				
	Understands limitations of experimental design and proposes alternative approaches				
Collects scientifically sound experimental data and interprets them correctly	Demonstrates expertise in relevant laboratory methods and techniques (and their underlying concepts)				
	Applies appropriate statistical analysis to data				
	Can prepare and explain appropriate data visuals (e.g., figures, tables)				
	Draws appropriate conclusions from the data and can justify those conclusions				
Demonstrates clear science communication	Student composes clear, logical, organized, grammatically correct, typo-free research document				
	Student composes and delivers presentation of their work to the committee that is understandable to a general biology audience				