

Student Name: _____
 Student UIN: _____
 Program: _____

BIMS Graduate Program
Learning Outcomes Assessment
 ~ Final Rubric ~

Faculty Name: _____
 Committee Role: _____
 Date: _____

Besides completing the Report of the Final Exam form required by the Texas A&M University Graduate and Professional School, each committee member will complete this rubric through which the Biomedical Sciences Graduate Program can capture how successfully students master the program's learning outcomes.

Please evaluate the student's achievement of the following learning outcomes as appropriate for the level of their degree (enter a 0 when not observable):

| <i>Effective Oral and Written Communication</i> | Mastery (5) | Proficient (4) | Acceptable (3) | Emerging (1 or 2) | Score |
|---|--|---|---|---|--------------|
| Exhibits effective oral communication skills | Prepared with full command of the topic and connects with the audience; clear and coherent in every part; strong visually and verbally | General command of the topic with few problems engaging audience; objectives and information clear; minor revision needed | Basic presentation with some audience engagement, lack of detail but informative, and moderate revision necessary | Substantial difficulty engaging audience, expressing clear and coherent thoughts, and speaking words | |
| Exhibits effective written communication skills | Fully identifies all relevant knowledge, methods, process, and findings that lead to clear and abstract conclusions | Demonstrates basic understanding of each aspect of research but lacks breadth or depth | Fundamentally sound writing yet insufficient detail in multiple sections or critical areas | Omits substantial elements of research; lack of clarity/limited detail throughout | |
| <i>Mastery and Integration of Knowledge</i> | | | | | |
| Demonstrates an appropriate breadth and depth of discipline-specific knowledge | Exhibits familiarity with all directly relevant and inter-disciplinary knowledge | Demonstrates a clear understanding of the knowledge base and principal concepts | Average level of understanding, limited to the main topics covered in curriculum | Beginning level of understanding, lacks command of the basic knowledge base | |
| Applies discipline-specific and broader knowledge in a range of contexts and critical decision-making | Engages in a forward-thinking discussion about the primary field and closely related concepts from other areas make an impact | Explains in detail how disciplinary knowledge and prior research in the field contributes to their study; fully aware of the implications of the current project fits in the discipline | Addresses questions from multiple fields confidently but vaguely or with limited and some incorrect detail | Rarely includes or cites established knowledge in the field; fails to integrate disciplinary knowledge with relevant research and scholarship from other fields | |
| <i>Research Skills</i> | | | | | |
| Successfully develops hypothesis-driven research | Forms hypothesis and experimental design to establish a long-term and scientifically significant research agenda | Develops a convincing hypothesis and relevant research project | Coherent hypothesis but weak experimental design | Fails to clearly state a hypothesis or defend their own hypothesis | |

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| <i>Research Skills (cont.)</i> | Mastery (5) | Proficient (4) | Acceptable (3) | Emerging (1 or 2) | Score |
|---|---|---|---|---|--------------|
| Conducts methodologically sound and data-supported research | Shows a thorough understanding of the methodology and relevancy of the data; discerns why this was the preferred approach | Explains methodology and research design with attention to rigor and reproducibility | Identifies research design and methods but does not justify their selection or effectiveness | Lacks comprehension of the methods and data collection needed in relation to the hypothesis | |
| Effectively participates as a member of a research team | Contributes to lab by originating discussion topics and presenting new/innovative ideas from professional development activities | Engages in discussion that supports lab and individual progress on research projects; participates in all scheduled meetings | Attends scheduled lab meetings with only occasional absences; offers ideas when directly involved in the project | Rarely contributes with input or feedback on team projects; may even lack decorum or become hostile to others in the lab | |
| Exhibits independence as a researcher | Demonstrates the self-efficacy to acquire the knowledge, skills, and abilities to persist in research activity; motivated to engage in new and innovative approaches | Takes initiative and is persistent in being productive in research activity; completes all degree milestones on time and may achieve more than expected in that timeframe | Makes satisfactory progress on individual project(s) while still asking questions and accepting necessary critique and guidance; will accept additional tasks | Lacks initiative to engage fully in one's own research and training; makes little or no progress without specific direction | |
| <i>Ethical Reasoning</i> | | | | | |
| Follows all biosafety, animal use, and other relevant practices | Develops the research design in accordance with responsible conduct of research; gains all approvals prior to initiating research and ensures compliance from start to finish | Learns policies and practices prior to engaging in research and completes all trainings; resolves ethical concerns as they arise | Identifies ethical issues but may or may not resolve the ethical concern before corrective action is necessary; completed all required trainings | Fails to participate in required training and obtain necessary approval prior to conducting regulated research activity | |
| Chooses ethical courses of action in research and practice | Recognizes ethical issues and formulates an approach prior to engaging in research | Comprehends the ethical issues and seeks a resolution | Identifies and attempts to respond to ethical issues | Fails to identify ethical issues | |

COMMENTS: