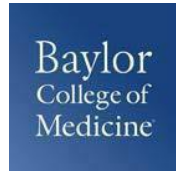


Defense of Dissertation Results

(See Article 10.2.2 of the Graduate School Policy Handbook)

Submit to Graduate School N204



**THE GRADUATE SCHOOL OF
BIOMEDICAL SCIENCES**

Student Name: _____ BCM ID #: _____

Graduate Program: _____ Are you also in the MD/PhD Program? YES NO

Completion of all requirements for the Ph.D. degree occurs with submission of final (signed) dissertation.

Date of Exam: _____

Exam Results: _____
Pass or Fail

	Printed Name	Signature	Date	INITIAL if present at Defense
Chairperson				
Committee Member				
Committee Member				
Committee Member				
Committee Member				
Committee Member				
Committee Member				
Committee Member				
Committee Member				
Program Director				
Dean of GSBS				

PLEASE RETURN THIS FORM, A COMPLETED DEFENSE-WRITTEN EVALUATION RUBRIC AND A DEFENSE-ORAL RUBRIC TO THE GRADUATE SCHOOL OFFICE IMMEDIATELY FOLLOWING THE EXAM.

If there are any significant deficiencies of the thesis (other than typographical errors) that must be corrected before final approval, indicate directly below or on attached pages:

Defense Written Rubrics

(attach to defense results form)

Student Name: _____

Criterion	Unacceptable = 1 point	Acceptable = 2 points	Very Good = 3 points	Outstanding = 4 points	Score
Knowledge of fundamental concepts	<ul style="list-style-type: none"> • Fails to display general knowledge of biomedical concepts • Lacks a good understanding of basic concepts, processes or conventions of the subject matter 	<ul style="list-style-type: none"> • Demonstrates basic, general knowledge of fundamental biomedical concepts • Knows the subject matter adequately, but is not critical of it 	<ul style="list-style-type: none"> • Demonstrates an in-depth understanding of biomedical concepts • Shows understanding and mastery of the subject matter 	<ul style="list-style-type: none"> • Exemplifies an in-depth and abstract knowledge of foundational biomedical concepts, and can discuss implications to related fields of inquiry • Exhibits command and authority over subject matter 	
Ability to critically evaluate research literature	<ul style="list-style-type: none"> • Demonstrate knowledge of factual material limited to a level appropriate for an undergraduate student • Fails to identify relevant literature in the field of inquiry 	<ul style="list-style-type: none"> • Demonstrates an awareness of the research literature in the field of inquiry • Identifies some unanswered questions/gaps in the literature 	<ul style="list-style-type: none"> • Understands and can integrate the current research literature in the field of inquiry • Successfully identifies and illustrates the importance of unanswered questions/gaps in the literature 	<ul style="list-style-type: none"> • Demonstrates a command and deep understanding of the current research literature in the field • Identifies unanswered questions/gaps in the literature and can relate these to more abstract or inter-related questions/theories beyond the immediate topic 	
Research design and data analysis	<ul style="list-style-type: none"> • Uses incorrect, inappropriate or outdated methodology • Data analysis is inappropriate or confused • Identifies no weaknesses in interpretation 	<ul style="list-style-type: none"> • Uses limited number of correct methodological approaches • Data analysis is acceptable, but fails to explore all possibilities and misses connections • Identifies no weaknesses in interpretation 	<ul style="list-style-type: none"> • Uses multiple correct methodological approaches • Data analysis is solid but misses opportunities to completely explore interesting issues or connections • Identifies some weaknesses in data interpretation 	<ul style="list-style-type: none"> • Employs multiple and creative methodological approaches • Analysis is comprehensive, complete, sophisticated and convincing • Identifies most/all weaknesses in data interpretation 	
Ability to draw conclusions	<ul style="list-style-type: none"> • Little discussion of research findings • Display poor grasp of material • Conclusion/summary not supported by findings 	<ul style="list-style-type: none"> • Discussion is present but lacking depth and/or some key concepts • Conclusion/summary not entirely supported by findings 	<ul style="list-style-type: none"> • Discussion is sufficient with few errors, but greater integration with past research is needed • Conclusions/summary based on outcomes and appropriate • Includes some recommendations 	<ul style="list-style-type: none"> • Discussion is well-constructed, accurate and engaging • Conclusions/summary and recommendations are appropriate and clearly based on outcomes 	
Rigor & Reproducibility	<ul style="list-style-type: none"> • Assessment of prior research lacks rigor • Potential biases & biological variables were not considered in research design • No authentication of biological or chemical resources 	<ul style="list-style-type: none"> • Identifies major weaknesses in rigor of prior research • Potential biases and biological variables were superficially addressed • Some authentication of research resources 	<ul style="list-style-type: none"> • Accounts for rigor deficiencies of prior work in own research • Potential biases and biological variables were most addressed • Key biological/chemical resources authenticated 	<ul style="list-style-type: none"> • Demonstrates in-depth understanding of rigor of prior research • Sophisticated research design and analysis fully addressed potential biases and biological variables • All resources authenticated in timely manner 	
Writing Skills	<ul style="list-style-type: none"> • Writing does not effectively communicate message • Numerous grammatical and/or spelling errors • Organization is poor • Quality of figures and tables is poor • Citations are missing or inappropriate 	<ul style="list-style-type: none"> • Writing is weak, but essential elements are present • Some grammatical and/or spelling errors present • Organization is adequate • Figures and tables are complete and convey information effectively • Citations are appropriate 	<ul style="list-style-type: none"> • Writing is adequate • Few to no grammatical or spelling errors • Organization is generally logical but with some minor gaps • Presentation of figures and tables enhances writing effectiveness 	<ul style="list-style-type: none"> • Writing is publication quality • Rules of grammar, syntax and spelling are consistently followed • Organization is excellent with smooth transitions • Figures and tables reflect careful consideration of effective data presentation • Skillful use of citations 	
TOTAL SCORE					

Required Approvals

Major Advisor

Signature

Date

Graduate Program Director

Signature

Date

Defense Oral Rubrics

(attach to defense results form)

Student Name: _____

Criterion	Unacceptable = 1 point	Acceptable = 2 points	Very Good = 3 points	Outstanding = 4 points	Score
Background scientific knowledge	<ul style="list-style-type: none"> Displays general knowledge of biomedical sciences appropriate for a baccalaureate student 	<ul style="list-style-type: none"> Demonstrates basic, general knowledge of biomedical sciences, consistent with graduate level training 	<ul style="list-style-type: none"> Demonstrates in-depth understanding of biomedical sciences and can apply them to their field of study 	<ul style="list-style-type: none"> Demonstrates in-depth understanding of fundamental biomedical sciences, related research literature, and implications to closely related field of study 	
Discipline-specific knowledge	<ul style="list-style-type: none"> Knowledge of bioscience related to the student's research area fails to adequately incorporate current research literature 	<ul style="list-style-type: none"> Displays an awareness of the literature in the area of research 	<ul style="list-style-type: none"> Exhibits a command of the literature related to area of research 	<ul style="list-style-type: none"> Displays evident of critical assessment and synthesis of the research literature yielding enhanced knowledge or bioscience 	
Oral Presentation skills	<ul style="list-style-type: none"> Reads material from slides Not comfortable with topic/presentation ;appears unpracticed Presentation/slides are poorly prepared and/or missing key information Presentation is unfocused Visual materials poorly support key points in presentation 	<ul style="list-style-type: none"> Relies too much on slides during presentation Somewhat comfortable with the topic/presentation Presentation is adequately paced Slides are appropriately paced Visual materials support key concepts in presentation 	<ul style="list-style-type: none"> Uses slides as a guide Is easily understandable Comfortable with topic/presentation; establishes eye contact with audience Overall presentation is effectively organized Visual materials facilitate understanding of abstractor difficult concepts 	<ul style="list-style-type: none"> Using slides as a guide, give detailed explanations that are easily understandable Keeps appropriate eye contact with audience Effective speaking style Presentation is well organized Slides effectively support and enhance the presentation 	
Defense of Thesis	<ul style="list-style-type: none"> Does not adequately defend research; Fails to respond adequately to key questions Responses are weak and show little to no understanding of the question/research Consistently fails to be appropriately responsive to questions unless prompted Structure of responses is weak and or difficult to follow 	<ul style="list-style-type: none"> Adequately defends research; answers questions but with little in sight Responses show basic understanding of research methods and findings Generally independently responsive to questions with occasional prompting or leading required Structure of response adequate, but some clarification/expansion of answers may be required 	<ul style="list-style-type: none"> Competently defends research; provides helpful answers to questions Responses display an in-depth comprehension of the research, including hypothesis, experimental design and significance Independently responsive to questions with limited need for prompts or clarification Structure of responses provides evidence of reflective organization of information 	<ul style="list-style-type: none"> Masterfully defends research; provides clear and insightful answers to questions Responses relate the hypothesis, methods, results and significance of the proposed research to more abstract ideas in the area of specialization Independently responsive to questions Structure and breadth of content or responses provides evidence of reflective and creative organization of information 	
Total Score					

Required Approvals

Major Advisor

_____ Signature _____ Date

Graduate Program Director

_____ Signature _____ Date