Department of Crop and Soil Science

Assessment Form of Graduate Learning Outcomes for MS/PhD Students

for Thesis Defense, Preliminary, and Final Examination

(To be filled by the graduate committee after completing the prelim exam or MS/PhD thesis defense)

Student's name: _____   **Date**: _____   **MS or Ph.D.**: ____

Graduate committee member name: _____

Thesis Title:

Check one: _____ **Prelim exam:** _____ **Defense** _____

For each learning outcomes below, please choose the score which best reflect the student's level. Below expectation=*1, Emerging=2, Developing= 3, Meet expectation=4, Competent=5, Exceed expectation, N/A= Unable to rate or not applicable.*

Learning Outcome	Score
1. Knowledge of Field. Demonstrated adequate depth of knowledge associated with their discipline.	
2. Evaluation. Appropriately designs, conducts, analyzes, and interprets research effectively in the discipline.	
a. Reviews the literature demonstrated knowledge of previous & current research in the field of study.	
b. Defining the Problem. Identified questions of his/her research.	
c. Methodology and Data Collection. Designed and implemented appropriate research experiments to test the hypothesis and solve problem.	
d. Data Analysis and Interpretation. Analyzed and interpreted research data appropriately.	
e. Conclusions and Recommendations. Presented conclusions and recommendations that are accurate, linked to data presented.	
3. Application. Communicated effectively to a diverse group of people with various methods.	
4. Synthesis. Demonstrated potential for original contribution to their discipline.	

Comments: Program-Level Competency Target = 4.0 for M.S. Students and 5.0 for PH.D. Students.

1. KNOWLEDGE OF FIELD. Understands the breadth and depth of knowledge associated with their discipline.

6 – Exceed Expectation	5 - Competent	4 - Met Expectation	3 – Developing	2 - Emerging	1 – Below Expectation	N/A
Clearly understood most the concepts associated with the discipline & the challenges & embedded issues.		Understood the key concepts associated with the discipline.		Does not understand, or minimal understanding of the key concepts, challenges or issues associated with the discipline		Unable to rate based on this work
Demonstrated accurate language, definitions, and terms appropriate to the audience.		Use of technical language, definitions, and terms accurately and appropriately.		Misused technical terms and concepts or relies on layperson's language.		
Demonstrated appropriate depth of knowledge associated with the discipline.		Demonstrated appropriate knowledge associated with the discipline, but lacks depth		Demonstrated limited depth of knowledge associated with the discipline.		
Comments:						

2. Evaluation. Designs, conducts, analyzes, and interprets research data related to their discipline.
2a. Literature: Search, Selection, & Review.

6 - Exceed Expectation	5 - Competent	4 – Met Expectation	3 - Developing	2 - Emerging	1 – Below Expectation	N/A
Uses appropriate, relevant, good number and current sources/references.		Uses moderate numbers of references that cover the research subject. Some sources may be irrelevant, out of date, or do not address key area(s) of the research.		Minimal or no evidence of search, or evaluation skills.		Unable to rate based on this work
Evaluated all or most sources for quality, relevance, and currency.		Evaluates sources minimally for quality, relevance, and currency		No evaluation of info sources is present.		
Identified gaps in the literature. Good knowledge of previous and current research in their discipline.		Identify some gaps in previous and/or current references in their discipline.		Does not identify info gaps in references. Limited knowledge of previous or current research in their discipline.		
Comments:						

2b. Defining the Problem.

6 - Exceed Expectation	5 - Competent	4 – Met Expectation	3 - Developing	2 - Emerging	1 – Below Expectation	N/A
Identifies a focused, unique, original problem that is challenging and well defined.		Identifies a somewhat focused problem but not particularly challenging or is simplistic. OR the problem is not well defined.		The problem, if identified, is confused or simplistic.		Unable to rate based on this work
Potential for significant contribution to the research/body of science in their discipline.		Limited potential contribution to the research/body of science in their discipline.		Contribution to the research/body of science in their discipline is not clear.		
Comments:						

2c. Methodology & Data Presentation.

6 – Exceed Expectation	5 - Competent	4 – Met Expectation	3 - Developing	2 - Emerging	1 – Below Expectation	N/A
Approach and methodology are complete, appropriate for the problem. Has knowledge of emerging methodologies in their discipline. Data collected and presented demonstrated a clear understanding of the problem/research. Data presented, graphs and tables are complete, accurate, relevant, and contain appropriate headings, descriptors, significant figures. Used appropriate statistics and Interpretations; presentations are accurate.		Approach and methodology are related to, but do not fully address the problems or uses inappropriate approach. Has limited knowledge of emerging methodologies in their discipline. Data collected and presented adequately. Relationship of the data to the problem are not entirely clear. Data presented are generally appropriate-Graphs and/or tables contain relevant headings, but some details may be missing or unclear, such as units and figures. Statistical analysis is generally understood and interpreted correctly.		Poor/inappropriate methodology related to the research. Has no knowledge of emerging methodologies in their discipline. Limited data collected demonstrate little attention to or understanding of the problem. Data presentation are incomplete, poorly labeled, confusing, or missing all together		Unable to rate based on this work
Comments:						

2d. Data Analysis and Interpretation.

6 – Exceed Expectation	5 - Competent	4 – Met Expectation	3 - Developing	2 - Emerging	1 – Below Expectation	N/A
Use and interpretation of data are accurate and thorough, including data in graphs and tables, as well as the overall results and conclusions. Logical and highly insightful inferences from the info presented. Excellent job in integrating literature and data in creative ways. Analysis demonstrates firm understanding of data. Data are discussed appropriately in detail.		Accurately uses interpretation, including data in graphs and tables, results, and conclusions. One or more minor points may be overlooked or misinterpreted. Generally, makes logical inferences, with few or minor mistakes. Demonstrates a basic understanding of the data and some ability to connect literature and data, but analysis is confusing in some spots or contains inaccuracies.		Little or no interpretation of data, and/or ideas found elsewhere. Misunderstands or misrepresents info given in their sources. Limited or no logical inferences from the info presented. Does not appear to understand the data/info.		Unable to rate based on this
Comments:						

2e. Conclusions and Recommendations.

6 – Exceed Expectation	5 - Competent	4 – Met Expectation	3 - Developing	2 - Emerging	1 – Below Expectation	N/A
Conclusions are accurate, appropriate, and clearly linked to problem and data presented. Conclusions and recommendations are balanced. Students consider uncertainties in the data or other limitations of the conclusions.		Conclusions are reasonable but may not take into account all critical factors. In a limited way, students consider uncertainties or other limitations of the conclusions...		Conclusions are inaccurate and/or unreasonable, do not reflect the data presented, or are merely a simplistic summary not tied to the original problem. Conclusions and recommendations do not reflect the research data.		Unable to rate based on this work
Comments:						

3. Application. Communicates effectively to a diverse group of people using appropriate traditional and emerging technological media.

6 – Exceed Expectation	5 - Competent	4 – Met Expectation	3 - Developing	2 - Emerging	1 – Below Expectation	N/A
Captures and communicates the intended idea(s) accurately and clearly. Main points connect with the audience and are smoothly tied together. Compellingly conveys why the issue matters. Visuals (graphs, tables, diagrams) are clear, concise, and relevant. Polished, error-free, and engaging. Professional.		Captures and communicates the intended idea(s) accurately, but parts are not clear. Generally easy to identify main points and transitions are usually smooth. Background and context sufficient to indicate the issue is important. Visuals (graphs, tables, diagrams) generally support the written component, but some overly complex, or redundant. Contains errors, but errors do not distract from or misrepresent content and ideas.		Inadequately/inaccurately captures and communicates the intended idea(s). Difficult to identify main points. Transitions may be rough. Limited background info and context so not at all clear why issue matters. Not clear how the visuals (graphs, tables, diagrams) add credibility to the topic. Multiple errors in grammar, syntax, punctuation, etc., that obscure and/or misrepresents the content.		Unable to rate based on this work
Comments:						

4. Synthesis. Demonstrates potential for original contribution to their discipline.

6 – Exceed Expectation	5 - Competent	4 – Met Expectation	3 - Developing	2 - Emerging	1 – Below Expectation	N/A
Research demonstrated excellent potential for original contribution to their discipline. Research is unique, well organized, complete, and statistically sound. Research prepares student for further productive research beyond graduate school.		Research demonstrated some potential for original contribution to their discipline. Research is unique but contains flaws in interpretation, organization, and/or statistics. Research prepares student for limited research beyond graduate school		Research contains serious flaws that would make it unpublishable. Not unique. Limited or no potential for student to do further research in this area.		Unable to rate based on this work
Comments:						

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