

NDFS MS/PhD Program Annual Report

Fall 2023 to Summer 2024

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Program Year in Review

Enrollment Fall 2023-Summer 2024			
MS	PhD48	PhD70	Total
15	7	3	25

Graduation Fall 2023-Summer 2024			
MS	PhD48	PhD70	Total
2		1	3

Program Assessment Activity and Data

Exit Survey

We have continued our practice of surveying graduating students. This feedback is essential to enhance our programs and provides an indirect measure of student achievement of program learning outcomes. We used the same 10 questions as previous years, on program satisfaction, perception of career preparation, and student self-evaluation of their achievement of the learning objectives. The anonymous survey was distributed via email to all MS and PhD graduates from Fall 2023- Summer 2024, and students who completed it received an aggie ice-cream voucher. However, this year we only had three students graduate, and one complete the exit survey. To try to maintain the anonymity of the data, quantitative results will be presented as four-year averages (we only have four years of data). Qualitative comments will not be shared this year, but instead will be combined with the exit survey data from next year and included in the 2024-2025 report.

Response Rate

From Fall 2023 to Summer 2024, 1 out of 3 graduates completed the exit survey, for a 33% response rate.

Quantitative Results

Over the four years that we've been conducting this survey, 91% (21/23) of respondents have rated their experience as somewhat or extremely positive.

Students have also self-evaluated their progress on program learning outcomes. Over the past four years, students rated their mastery of subject material as comparable to peers from other institutions (30%) or somewhat (43%) or far above the average (29%). All the students strongly agreed that after completing our program they are prepared to conduct scholarly activities in an ethical manner. Finally, 100% of the students agreed that they had conducted, presented, and defended a body of knowledge (for MS) or significant contribution to knowledge (PhD) during their program.

Annual review meeting

For the past 7 years, the program has required an annual meeting of each MS/PhD students' graduate committee to evaluate student progress. The committees are instructed to complete an annual review form to track progress and document the meeting, any areas of concern, and corrective actions prescribed by the committee. Although rate of compliance with this rule has typically been low, we are pleased to report that we saw a continued increase in the percent of students that submitted a form for this calendar year. This improvement may be the result of emphasizing the purpose and use of the annual review form at our annual graduate student orientation, and efforts of previous years. Further, this year we had much less missing data in the committee's ratings on student progress towards program learning objectives, after discussion of its importance and use at a graduate faculty meeting.

Annual Review Form Submission Rates MS/PhD Students	
2017-2018	30%
2018-2019	23%
2019-2020	17%
2020-2021	29%
2021-2022	25%
2022-2023	42%
2023-2024	52%

The annual review form tracks important milestones, research progress, and documents if any corrective action is required. All students were rated as "meets expectations" or "Exceeds expectations" on all learning objectives. Additionally, in 5 instances students were also given suggestions on how to improve on that learning objective, for example "Needs to improve scientific writing. Seek feedback through library." and "Increase knowledge on dairy and rumen microbial metabolism."

Please see the appendix for full annual review form data.

[Dissertation rubric forms](#)

Starting in Spring 2021, the NDFS faculty adopted a rubric for PhD dissertation and MS thesis defenses. In Fall 2023-Summer 2024 we had 1 PhD Dissertation defense and 0 MS Thesis defenses. All students met or exceeded expectations.

See appendix for full rubric data.

[Program Assessment Data Summary Fall 2023-Summer 2024](#)

PhD Program Assessment Summary Fall 2023-Summer 2024

PhD Learning Objective: 1. Demonstrate mastery of subject material in their field of study, broadly defined.	
Direct Evidence	Indirect Evidence
<p>Annual Review Form <i>Progress on Program Learning Objectives</i>:</p> <ul style="list-style-type: none"> 100% met or exceeded expectations on “Demonstrate mastery of subject material . . .” (n=9, exceeds=4, meets=5) 	<p>Over the past four years, students rated their mastery of subject material to peers from other institutions as comparable (30%) or somewhat above (43%) or far above the average (29%). (n=21, this data combines MS and PhD students, not all survey respondents have provided data on which program they completed.)</p>
<p>Defense rubrics <i>Quality of Scholarly Work</i> section:</p> <ul style="list-style-type: none"> 100% exceeded expectations on “Mastery of fundamental knowledge in the field” (n=1) 100% exceeded expectations on “Ability to access and integrate information . . .” (n=1) 	<p>All students pass comprehensive exam, or complete conditions needed for pass</p>
<p>Defense Rubric <i>Breadth and Depth of Knowledge</i> section:</p> <ul style="list-style-type: none"> 100% exceeded expectations on “Defends, clarifies, and expands upon written dissertation with further evidence and argument” (n=1) 100% exceeded expectations on “Demonstrates knowledge of dissertation subject, primary sources, and background scholarship . . .” (n=1) 	<p>All students design and complete their plan of study, approved by their committee, earning grades of C or better</p>

PhD Learning Objective: 2. Produce an original body of research conducted during their program.

Direct Evidence	Indirect Evidence
<p>Annual Review Form <i>Progress on Program Learning Objectives</i>:</p> <ul style="list-style-type: none"> 100% met or exceeded expectations on “Produce an original body of research . . .” (n=9, exceeds=5, meets=3, missing=1) 	<p>Exit survey: Over the past four years, 100% of students agreed that they have done this as part of their degree program. (n=18, this data combines MS and PhD students, not all survey respondents have provided data on which program they completed.)</p>
<p>Defense rubric <i>Contribution to Discipline</i>:</p> <ul style="list-style-type: none"> 100% met expectations on “Impact of research on the field” (n=1) 100% exceeded expectations on “Publication potential” (n=1) 	

PhD Learning Objective: 3. Write in a clear, convincing, and organized manner.

Direct Evidence	Indirect Evidence
<p>Annual Review Form <i>Progress on Program Learning Objectives</i>:</p> <ul style="list-style-type: none"> 100% met or exceeded expectations on “Write in a clear . . .” (n=9, exceeds=1, meets=7, missing=1) 	<p>All students write a research proposal, evaluated by committee without a rubric.</p> <p>All students complete a written portion of the comprehensive exam, evaluated by the committee without a rubric.</p>
<p>Defense Rubric <i>Quality of Writing</i>:</p> <ul style="list-style-type: none"> 100% exceeded expectations on “Skilled at scientific/technical writing” (n=1) 100% exceeded expectations on “Organization, sentence structure, grammar, mechanics, and spelling.” (n=1) 	

PhD Learning objective: 4. Present in a confident, organized, and engaging manner.

Direct Evidence	Indirect Evidence
<p>Annual Review Form <i>Progress on Program Learning Objectives</i>:</p> <ul style="list-style-type: none"> 100% met or exceeded expectations on “Present in a confident . . .” (n=9, exceeds=2, meets=7) 	<p>All students present a research proposal, evaluated by committee without a rubric.</p> <p>All students complete an oral portion of the comprehensive exam, evaluated by the committee without a rubric.</p>
<p>Defense rubric <i>Quality of Presentation</i> section:</p> <ul style="list-style-type: none"> 100% exceeded expectations on “Presentation design” (n=1) 100% exceeded expectations on “Content and organization” (n=1) 100% exceeded expectations on “Presenter skills” (n=1) 	

PhD Learning Objective: 5. Defend decisions and conclusions by providing accurate, clear, and insightful evidence and answers to questions.

Direct Evidence	Indirect Evidence
<p>Annual Review Form <i>Progress on Program Learning Objectives</i>:</p> <ul style="list-style-type: none"> 100% met or exceeded expectations on “Defend decisions . . .” (n=9, exceeds=2, meets=7) 	<p>All students defend a research proposal, evaluated by committee without a rubric.</p>
<p>Defense rubric <i>Response to Questions</i> section:</p> <ul style="list-style-type: none"> 100% exceeded expectations on “Directly and correctly answers the examiner’s questions” (n=1) 100% exceeded expectations on “Shows evidence of critical thinking and an awareness of the limits of his or her knowledge” (n=1) 	<p>All students defend their work on the comprehensive exam, evaluated by the committee without a rubric.</p>
<p>Defense Rubric <i>Breadth and Depth of Knowledge</i> section:</p> <ul style="list-style-type: none"> 100% exceeded expectations on “Defends . . . written dissertation with further evidence and argument” (n=1) 	

PhD Learning objective: 6. Conduct scholarly activities in an ethical manner.

Direct Evidence	Indirect Evidence
<p>Annual Review Forms <i>Ethics Training</i></p> <ul style="list-style-type: none">60% or 3 out of 5 students have completed an ethics training (CITI or similar) by year 2	<p>Exit survey: 100% of students agree that they can conduct scholarly activities in an ethical manner (n=1, definitely yes=1)</p>
<p>Annual Review Form <i>Progress on Program Learning Objectives:</i></p> <ul style="list-style-type: none">100% met or exceeded expectations on “Conduct scholarly activities in an ethical manner.” (n=9, exceeds=4, meets=5)	

MS Learning Objective: 1. Demonstrate mastery of subject material in their field of study, broadly defined	
Direct Evidence	Indirect Evidence
Annual Review Form <i>Progress on Program Learning Objectives</i> : <ul style="list-style-type: none"> 100% met or exceeded expectations on “Demonstrate mastery of subject material . . .” (n=4, exceeds=1, meets=3, missing=2) 	Over the past four years, students rated their mastery of subject material to peers from other institutions as comparable (30%) or somewhat above (43%) or far above the average (29%). (n=21, this data combines MS and PhD students, not all survey respondents have provided data on which program they completed.)
Defense rubrics <i>Quality of Scholarly Work</i> section: <ul style="list-style-type: none"> No data for this year 	
Defense Rubric <i>Breadth and Depth of Knowledge</i> section: <ul style="list-style-type: none"> No data for this year 	

MS Learning Objective: 2. Produce an original significant contribution to knowledge during their program.	
Direct Evidence	Indirect Evidence
Annual Review Form <i>Progress on Program Learning Objectives</i> : <ul style="list-style-type: none"> 100% met or exceeded expectations on “Produce an original significant contribution . . .” (n=4, exceeds=1, meets=3) 	Exit survey: Over the past four years, 100% of students agreed that they have done this as part of their degree program. (n=18, this data combines MS and PhD students, not all survey respondents have provided data on which program they completed.)
Defense Rubric <i>Contribution to Discipline</i> : <ul style="list-style-type: none"> No data for this year 	

MS Learning Objective: 3. Write in a clear, convincing, and organized manner.	
Direct Evidence	Indirect Evidence
Annual Review Form <i>Progress on Program Learning Objectives</i> : <ul style="list-style-type: none"> 100% met or exceeded expectations on “Write in a clear . . .” (n=4, exceeds=1, meets=3) 	
Defense Rubric <i>Quality of Writing</i> : <ul style="list-style-type: none"> No data for this year 	All students write their research proposal, evaluated by committee without a rubric

MS Learning Objective: 4. Present in a confident, organized, and engaging manner.	
Direct Evidence	Indirect Evidence
Annual Review Form <i>Progress on Program Learning Objectives</i> : <ul style="list-style-type: none"> 100% met or exceeded expectations on “Present in a confident . . .” (n=4, exceeds=1, meets=3) 	All students present their research proposal, it is evaluated by committee without a rubric
Defense rubric <i>Quality of Presentation</i> section: <ul style="list-style-type: none"> No data for this year 	

MS Learning Objective: 5. Defend decisions and conclusions by providing accurate, clear, and insightful evidence and answers to questions.	
Direct Evidence	Indirect Evidence
Annual Review Form <i>Progress on Program Learning Objectives</i> : <ul style="list-style-type: none"> 100% met expectations on “Defend decisions . . .” (n=4, meets=4) 	All students defend their research proposal, evaluated by committee without a rubric
Defense rubric <i>Response to Questions</i> section: <ul style="list-style-type: none"> No data for this year 	

Defense Rubric *Breadth and Depth of Knowledge* section:

- No data for this year

MS Learning Objective: 6. Conduct scholarly activities in an ethical manner.

Direct Evidence	Indirect Evidence
Annual Review Forms <i>Ethics Training</i> <ul style="list-style-type: none">• 100% or 1 out of 1 students have completed an ethics training (CITI or similar) by year 2	Exit survey: Over the past four years, 100% of students agreed that they feel confident in their ability to conduct scholarly activities in an ethical manner. (n=21, this data combines MS and PhD students, not all survey respondents have provided data on which program they completed.)
Annual Review Form <i>Progress on Program Learning Objectives</i> : <ul style="list-style-type: none">• 100% met or exceeded expectations on “Conduct scholarly activities . . .” (n=4, exceeds=1, meets=3)	

Faculty Response to Assessment Data

In the year of Fall 2023-Summer 2024 our main program goal was to continue our efforts to improve our program in response to assessment data. This primarily included continued work to improve the communication of program and university requirements and student and advisor expectations. The full graduate faculty met one time during this time period, with numerous smaller meetings of working groups and teams.

Program Communication

This year we continued to improve program communication using several different mechanisms: we continued improving and using our canvas page and new graduate student mentorship agreements. In addition, we updated the handbook and conducted a yearly orientation required for all newly enrolled students and open to continuing students and faculty.

Canvas Page

The program canvas page is a repository of program resources such as the program handbook, required forms, and others as identified. The GPD uses announcements and canvas email to communicate with graduate students. Future work could include the use of ungraded “assignments” for required departmental forms. We have started gathering examples of excellent MS and PhD project proposals, and examples of comprehensive exam prompts and written responses. Our GPD and Business Manager created a faculty-only resource that details the steps of how to accept a graduate student.

Graduate Student Mentorship Agreements

Starting this year, a new mentorship agreement was required by our college. A draft agreement template was provided by the college. We encouraged our faculty to expand on the minimal draft, potentially considering the draft list of Mentor/Mentee Expectations and Responsibilities drafted by a sub-set of the graduate faculty in 2022, but not formerly finalized or adopted, given the work at the college and graduate school level to address similar concerns. For example, the graduate school is working on new resources that will outline student rights and responsibilities.

Program Assessment

The revised program assessment plan was approved via faculty vote in Fall 2022. We have continued to implement that plan, using our departmental annual review form, designed to evaluate student progress on important milestones and program learning objectives, with built in suggestions for improvement if needed. We have continued to use the PhD Dissertation Defense Rubric and MS Thesis Defense Rubric (adapted from forms created by Abby Benninghoff, our previous Associate Dean for Graduate Studies) to gather data on achievement of program learning objectives. Our exit survey has continued to be a source of important qualitative data on program strengths and areas for improvement.

Dissertation/Thesis Exam Rubric

Last year we had one student score *does not meet expectations* on “ability to draw reasoned conclusions from a body of knowledge” and another scored *does not meet expectations* on “potential for research dissemination via publication or presentation.” The faculty discussed this during our meeting in the 2023-2024 year. The faculty agreed that students should in general meet expectations on all criteria, but that they should be able to pass if the committee agrees that they have met expectations on larger criteria and overall for the document and defense. This clarification should be incorporated in any future protocol developed for use of the rubrics.

Comprehensive Exam Rubric

A new committee has taken up the work to develop, finalize, and adopt a rubric and protocol for our comprehensive exams. The purpose of these documents will be to standardize exam evaluation and collect direct evidence of student learning for program assessment. Previously, a first draft of the document was drafted by a sub-committee with representation from both food science (Dr. Taylor Oberg and Dr. Prateek Sharma) and nutrition science (Dr. Carrie Durward and Dr. Heidi Wengreen). Work on this rubric was put on hold due to time constraints. In the coming year the committee plans to present the draft to the faculty, revise as needed, and vote to adopt.

Curriculum

The primary work of the curriculum committee this year was to identify potential courses of concern in response to an announced change from the graduate school that MS/PhD students would no longer be allowed to count 5000-level courses towards degree requirements. The MS/PhD Graduate faculty identified potential courses of concern and discussed alternative courses to meet requirements. We also examined the need for a certain number of in-person courses for international graduate students, given that many of our graduate courses are being taught asynchronously online to fit the needs of our MPH program. However, we later learned that the graduate school would not be changing the requirement, so we didn't need to make any of the anticipated changes to our course offerings or degree requirements.

Appendices

Annual Review Form Data

MS Student Progress On Program Learning Objectives, Fall 2023- Summer 2024 Annual Review Meetings MS (n=4)				
Program learning objectives.	Does not meet expectations	Meets expectations	Exceeds expectations	Missing
1. Demonstrate mastery of subject material in their field of study, broadly defined		75% (n=3)	25% (n=1)	
2. Produce an original significant contribution to knowledge during their program.		75% (n=3)	25% (n=1)	
3. Write in a clear, convincing, and organized manner.		75% (n=3)	25% (n=1)	
4. Present in a confident, organized, and engaging manner.		75% (n=3)	25% (n=1)	
5. Defend decisions and conclusions by providing accurate, clear, and insightful evidence and answers to questions.		100% (n=4)		
6. Conduct scholarly activities in an ethical manner.		75% (n=3)	25% (n=1)	

PhD Student Progress On Program Learning Objectives, Fall 2023- Summer 2024 Annual Review Meetings PhD (combined PhD48 and PhD70 n=9)				
Program learning objectives.	Does not meet expectations	Meets expectations	Exceeds expectations	Missing
1. Demonstrate mastery of subject material in their field of study, broadly defined		56% (n=5)	44% (n=4)	
2. Produce an original body of research conducted during their program.		33% (n=3)	56% (n=5)	11% (n=1)
3. Write in a clear, convincing, and organized manner.		78% (n=7)	11% (n=1)	11% (n=1)
4. Present in a confident, organized, and engaging manner.		78% (n=7)	22% (n=2)	
5. Defend decisions and conclusions by providing accurate, clear, and insightful evidence and answers to questions.		78% (n=7)	22% (n=2)	
6. Conduct scholarly activities in an ethical manner.		56% (n=5)	44% (n=4)	

Dissertation Rubric Data

Fall 2023-Summer 2024 Dissertation Documents: Percent and (number) of students rated at Exceeded, Met, and Did not meet Expectations*					
		Fall 2021-Summer 2022			
		Does not meet expectations	Meets expectations	Exceeds expectations	Missing
Quality of the Scholarly Work	Mastery of fundamental knowledge in the field			100% (n=1)	
	Ability to access and integrate information into a cohesive overview of current knowledge. Ability to critically evaluate the meaning, value and contribution of published literature in the field.			100% (n=1)	
	Imagination and originality of thought		100% (n=1)		
	Ability to design and implement an appropriate collection and analysis of data.			100% (n=1)	
	Ability to draw reasoned conclusions from a body of knowledge		100% (n=1)		
Contribution to Discipline	Impact of research on the field		100% (n=1)		
	Publication potential			100% (n=1)	
Quality of Writing	Skilled at scientific/technical writing			100% (n=1)	
	Organization, sentence structure, grammar, mechanics and spelling			100% (n=1)	
Overall assessment of Dissertation Document				100% (n=1)	
*This data is from 1 student, the average of 5 rubrics.					

Fall 2023-Summer 2024 Dissertation Defense Presentations: Number that Exceeded, Met, and Did not meet Expectations*

		Does not meet expectations	Meets expectations	Exceeds expectations	Missing
Quality of Presentation	Presentation design			100% (n=1)	
	Content and organization			100% (n=1)	
	Presenter skills			100% (n=1)	
Breadth and Depth of Knowledge	Defends, clarifies, and expands upon written dissertation with further evidence and argument			100% (n=1)	
	Demonstrates knowledge of dissertation subject, primary sources, and background scholarship; demonstrates ability to synthesize dissertation topic with broader topics in the discipline			100% (n=1)	
Quality of Responses to Questions	Directly and correctly answers the examiner's questions			100% (n=1)	
	Shows evidence of critical thinking and an awareness of the limits of his or her knowledge			100% (n=1)	
Overall assessment Oral Defense				100% (n=1)	

*This data is from 1 student, the average of 5 rubrics.