

## **Ph.D. Requirements – General Instructions**

### **Dairy Science Ph.D. Requirements**

To complete the Ph.D. degree in the Department of Dairy Science at University of Wisconsin-Madison requires successful completion of the following items. These must be completed in a timely fashion or the student will not be allowed to continue registration. Working closely with your advisor and committee are essential for successful completion of a Ph.D. Please note that minimum requirements are provided, however successful completion of the Ph.D. requires achievement of the standing of demonstrated scientist, through your Ph.D. program and by making a significant research contribution to the scientific literature.

- I.** Form a Ph.D. mentor and examination Committee (by end of 1st semester).
- II.** Meet with your Ph.D. Committee. Approve coursework and immediate research plans (by end of 2nd Semester)
- III.** Schedule preliminary examination and file request for preliminary examination (by end of 4th semester).
- IV.** Complete Written Preliminary Examination, Complete Oral Preliminary Examination (by end of 5th semester).  
If passed, Warrant should be signed and returned to Graduate School. You will be a dissertator.
- V.** Complete research and thesis. Regular meetings with your Committee are expected.
- VI.** Request for final examination (includes documentation that exam requirements have been met).
- VII.** Final Defense and Examination.

**The following forms must be completed, signed, and returned to departmental student services coordinator at the proper times.**

**Be sure to keep a copy of all signed forms, warrants, etc.**

## Ph.D. Requirements - Preliminary Examination Committee

### I. Ph.D. Mentor and Preliminary Examination Committee (This form must be completed and approved by end of the first semester.)

<b>Name of Student:</b>		<b>Student ID:</b>	
<b>Discipline:</b>			

**Major professor and four committee members are required. Additional committee members may also be selected.**

	Name	Department
Major professor:		
Committee member #1:		
Committee member #2:		
Committee member #3		
Committee member #4		

### APPROVALS

	<b>Student</b>	Date
Signed:		
	<b>Major Professor</b>	Date
Approved:		
	<b>Chair, Dairy Science Graduate Committee</b>	Date
Approved:		

### Instructions

1. A minimum of five faculty members are required. At least 3 of the committee members must be tenure-track faculty in the Department of Dairy Science.
2. One faculty member on the Committee must be from outside of the Dairy Science Department.
3. The graduate student requests the participation of the faculty on the committee.
4. The student, major professor, and chair of the Dairy Science Graduate Committee must approve of all members on this committee.
5. Changes to Ph.D. Committee must be submitted in writing to Graduate Committee.

## Ph.D. Requirements - Course Requirements

### II. Required Courses to be completed prior to or during Ph.D. study (This form must be completed and approved by the end of the second semester.)

Student:		Student ID:	
----------	--	-------------	--

#### A. Biochemistry (must require Organic Chemistry as a prerequisite):

	Dept.	Course #	Course Title	Credits	Grade	Institution
Biochemistry						

#### B. Statistics and Calculus:

1. A course in statistics (300 level or above)
2. A calculus course

	Dept.	Course #	Course Title	Credits	Grade	Institution
Statistics						
Calculus						

#### C. Dairy or Animal Science Courses

One course (300 level or higher, at least 2 credits, grade of B or better) in each of the following: animal genetics, ruminant or animal nutrition, animal physiology, and dairy cattle management.

	Dept.	Course #	Course Title	Credits	Grade	Institution
Genetics						
Nutrition						
Physiology						
Management						

#### D. Special Skills: Complete a course in 2 of the 3 following areas:

1. Educational principles (DS 799, Teaching or Extension Practicum or other approved course)
2. Technical Writing course or Writing Practicum
3. Advanced course in Philosophy of Science, History of Science, or Ethics of Science

Skill	Dept.	Course #	Course Title	Credits	Grade	Institution
1.						
2.						

#### APPROVALS

	<b>Student</b>	Date
Signed:		
	<b>Major Professor</b>	Date
Approved:		
	<b>Chair, Dairy Science Graduate Committee</b>	Date
Approved:		

## Ph.D. Requirements - Plan of Study Instructions

### Instructions for Plan of Study (see next page for form to be completed)

Students must meet all Graduate School and Departmental requirements.

Students should discuss planned coursework with major professor and Ph.D. committee.

#### Departmental Requirements:

1. Minimum of 51 graduate credits (semester credits, courses numbered 300 or greater) after the BS degree. A minimum of 32 of these credits must be taken while a graduate student at UW-Madison (Minimum Graduate Residence Credit Requirement).

**NOTE:** Courses taken post-BS as a Special Student (not enrolled in a graduate program) do NOT automatically count toward a graduate degree. To use these credits toward a graduate degree, the student should obtain approval of the department and graduate school PRIOR to taking the courses.

2. At least 50% of the graduate coursework (26 credits) must be in courses designed for graduate work. In other words, courses numbered  $\geq 700$  or courses numbered 500-699 that are composed of at least 50% graduate students or courses that assess graduate students separately from undergraduates.
3. Minimum 3.0 GPA (B average) in all graduate coursework taken at UW-Madison.
4. Minimum of 12 Credits of Dairy Science 990 (Research) with a grade of B or better.
5. Graduate Seminar: A grade of B or better in Departmental Graduate Seminar (DySci 900 section 001) is required in the Spring Semester of each year.
6. Students should be advised that the above represent minimum requirements. Most students require coursework, research and time in excess of the minimum to successfully complete the Ph.D. degree. In addition, Ph.D. committees may suggest additional courses.
7. Prior to attaining dissertator status, full time students should register for 8-15 total credits (courses, seminars and research) per semester. Students conducting research should register for at least 1 credit of Dairy Science 990 during each semester when research is conducted.
8. After attaining dissertator status, the student must register for 3 credits per semester until graduation. During Spring Semester, 1 of these must be Graduate Seminar (900, section 1).
9. A minor is not required in the Dairy Science Department. However, a minor or graduate certificate in specific areas can provide breadth to a graduate student and can be a positive for future applications for faculty or company positions. The Ph.D. Committee or Major Professor may request a minor for a Ph.D. student.
10. Teaching (or extension) practicum 799 is encouraged and counts toward the credit total in points #1 and #2 above.

**III. Plan of Study**

(This form must be completed and approved by the end of the second semester.)

Student:		Student ID:	
----------	--	-------------	--

**LIST PROPOSED GRADUATE COURSES.**

Credits should total at least 51 semester hours, with at least 26 credits from courses numbered  $\geq 700$  or courses numbered 500-699 that are composed of at least 50% graduate students or courses that assess graduate students separately from undergraduates. At least 32 credits must be taken at UW-Madison.

Course	Description	Credits	Institution

**APPROVALS:**

	<b>Student:</b>	Date
Signed:		
	<b>Major Professor:</b>	Date
Approved:		
	<b>Committee Members:</b>	
Signed:		
Signed:		
Signed:		
Signed:		
	<b>Chair, Dairy Science Graduate Committee</b>	Date
Approved:		

## Ph.D. Requirements - Request for Preliminary Examination Warrant

### IV. Request for Preliminary Examination

(This form must be approved prior to the end of the Fourth Semester)

	Name	Signature	Date
<b>Student:</b>			
<b>Major Professor:</b>			

Student and major professor should complete indicated sections. Dairy Science Graduate Committee will verify that all departmental requirements have been met and request the Preliminary Exam Warrant.

**GRADUATE DEPARTMENTAL SEMINAR** (Dy Sci 900, Section 1, each Spring)

**Fill in Semesters taken and grade.** Last column is for Committee Use.

Semester	Grade	OK (Office Use)

**SEMINAR PRESENTATIONS (At least one prior to Preliminary Examination)**

**List Seminar presentations.** Major Professor signature verifies satisfactory completion.

Date	Title	Location/Group	Major Prof. Signature

**Checklist of requirements (For Office Use Only).** Student should use this as a guide, but leave the OK column blank for office to use.

	Requirement	OK (Office)
1.	Certification form filed and approved	
2.	Preliminary Examination Committee approved	
3.	Satisfactory Progress on coursework plan	
4.	Minimum GPA of 3.0	

**APPROVED**

	Chair, Dairy Science Graduate Committee	Date
Approved:		

## Ph.D. Requirements - Preliminary Examination Instructions

### Instructions for Preliminary Examination

All Ph.D. students are required to pass a qualifying examination before the end of the fifth semester of their Ph.D. program, after the majority of their coursework is completed. The purpose of the qualifying examination is not to evaluate progress on the thesis project. **The purpose of the qualifying examination is to assess the depth and breadth of knowledge and evaluate the candidate's ability for scientific reasoning.**

The qualifying examination will include two components: a written examination followed by an oral examination. The format (timing, location, open/closed book) of the written and oral examinations shall be determined by the major professor, agreed upon by the members of the Ph.D. committee, and approved by the chair of the Dairy Science Graduate Committee. The Ph.D. committee will be responsible for both the written and oral exam questions. The oral examination shall take place within 4 weeks of completion of the written examination. After completion of the written and oral components of the qualifying examination, the Ph.D. committee will determine whether the candidate has passed the examination. In the event of a failed examination, the candidate may ask the Ph.D. committee for an opportunity to retake the examination. This request must be written, and it must be submitted no later than 4 weeks after the first oral examination. The chair of the Dairy Science Graduate Committee must be copied on the request. The second examination will be with the same Ph.D. committee, will include both written and oral components, and must follow the same format as the first examination. The second examination must be completed within 6 months of the first examination, and if the second examination is failed the candidate will be terminated from the Dairy Science graduate program.

## Ph.D. Requirements – Plan for Preliminary Examination

### V. Plan and Dates for Ph.D. Preliminary Examinations (This form must be approved prior to the end of the fourth semester.)

<b>Name of Student:</b>	
-------------------------	--

**Plan for Preliminary Examination:**

**Date of Written Examination:**

**Date of Oral Examination:**

#### APPROVALS:

	<b>Major Professor:</b>	Date
Approved:		
	<b>Committee Members:</b>	
Signed:		
Signed:		
Signed:		
Signed:		
	<b>Chair, Dairy Science Graduate Committee</b>	Date
Approved:		



## Ph.D. Requirements - Request for Ph.D. Final Examination Warrant

### VI. Proposed Ph.D. Final Examination Committee:

(Note: This committee may be the same or different from Ph.D. Preliminary Examination Committee)

<b>Name of Student:</b>	
<b>Discipline:</b>	

1. A minimum of five faculty members are required. At least 3 members must be tenure-track faculty members from the Department of Dairy Science (see Appendix A for eligible faculty).
2. One faculty member must be from outside of the Dairy Science Department. The outside member must not be an affiliate of the Dairy Science Department

**Major professor and four committee members are required. Additional committee members may also be selected.**

	Name	Discipline	Department
Major professor:			
Committee member:			
Committee member:			
Committee member:			
Committee member:			

### APPROVALS

	<b>Student</b>	Date
Signed:		
	<b>Major Professor</b>	Date
Approved:		
	<b>Chair, Dairy Science Graduate Committee</b>	Date
Approved:		

## VII. Requirements to be met prior to Ph.D. Final Examination:

	Name	Signature	Date
<b>Student:</b>			
<b>Major Professor:</b>			

Fill in indicated spaces. The Department will then use this checklist to verify that all requirements have been met and request a warrant from the Graduate School.

### SEMINAR PRESENTATIONS (Total of 3 during Graduate Program)

**List Seminar presentations.** Signature of Major Professor verifies satisfactory completion.

Date	Title	Location/Group	Major Prof. Signature

### DEPARTMENTAL SEMINAR since preliminary exam

**Fill in Semesters taken and grade.** Last column is for Committee Use.

Semester	Grade	OK (Office Use)

### Checklist of Requirements (Office use)

	Requirement	OK (Office)
1.	Passed preliminary exam	
2.	Completion of any deficiencies from preliminary examination	
3.	Completion of all coursework listed on certification form	
4.	Final Examination Committee approved	
5.	Completion of coursework plan, including 51 credits graduate coursework	
6.	Completion of 32 graduate credits at UW-Madison	
7.	Minimum GPA of 3.0	
8.	At least 12 Credits of research	
9.	Continuous enrollment since Preliminary exam	

### APPROVED

	Chair, Dairy Science Graduate Committee	Date
Approved:		

**APPENDIX A**  
**Faculty Eligibility for Dairy Science Ph.D. Committees**

Faculty with Primary Appointment in the Department of Dairy Science (no restrictions)	Faculty with Secondary or Affiliate Appointments in Department of Dairy Science (can be major professor or member of Ph.D. committee with at least 3 faculty with Primary Appointment in Dairy Science)	Clinical Faculty and Academic Staff with Primary, Secondary, or Affiliate Appointments in Department of Dairy Science (can be 5 <sup>th</sup> member of Ph.D. committee)
Lou Armentano	Dorte Dopfer	Wayne Coblentz
Victor Cabrera	Daniel Gianola	Nigel Cook
Dave Combs	Brian Kirkpatrick	Mary Beth Hall
Paul Fricke	Garrett Oetzel	Pat Hoffman
Laura Hernandez	Jess Reed	Ken Nordlund
Pam Ruegg	Doug Reinemann	Other UW-Madison or External Scientist if Approved by Chair of the Departmental Graduate Program
Randy Shaver	Other Tenure-Track Faculty Member at UW-Madison	
Amy Stanton		
Michel Wattiaux		
Kent Weigel		
Heather White		
Milo Wiltbank		