

Poultry Products 508 (3 Credits) Syllabus

8:30 – 12:00

1:30 – 4:30

CONTENT IS AVAILABLE ON-LINE ON CANVAS

WEEK 1 (June 11-15, 2018)

Muscle Food Products

Mark Richards
University of Wisconsin-Madison
Dept. Animal Sciences
Phone: (608) 262-1792
mprichards@ansci.wisc.edu

Food Applications Lab Instructor
Beth Button (Faculty Assistant)
Dept. Food Science (UW-Madison)
Phone: (608) 265-2388
button@wisc.edu

Guest Speaker
Andy Milkowski (Adjunct Professor)
Adam Borger (Outreach Prgrm Mngr)

Teaching Assistants

James Whalin
Sofia Erazo-Castrejon

WEEK 2 (June 18-22, 2018)

Egg and Egg Products

Microbiology and Food Safety
Manpreet Singh
University of Georgia
Department of Poultry Science
(706) 542-9971
manpreet@uga.edu

Egg Functionality
Deana Jones
Russell Research Center
Agricultural Research Service
Phone (706) 546-3486
Deana.Jones@ARS.USDA.GOV

Guest Speaker

Office Hours: schedule an individual meeting with each instructor as needed.

Course Description and Intended Learning Outcomes:

- This course will cover the basic principles and technologies involved in producing eggs, egg products and muscle-based products.
- Emphasis will be placed on understanding the role of chemical and physical processes that go into producing a high quality product.
- Students will learn how to quantitatively measure quality attributes of the different products they produce in the laboratory segments.
- An understanding of why a certain ingredient is needed in one product but not another product will be essential. Basic microbiological principles related to product quality and food safety will be described.
- Reflection exercises to process general concepts

Field Trip:

The tour will serve to introduce students to real world processing technologies in the poultry and meat industry. Time will be allotted to direct questions to the tour guide. A field trip is scheduled for **Friday June 22**. Bring a sweatshirt/jacket.

Requirements: Wear closed-toe shoes without heels and wear pants during laboratory exercises and field trips. No jewelry is permitted. Complete the security form before the trip (if required). T-shirts or long sleeve shirts are permitted, tank tops are not.

Plan to have NO contact with live fowl within 72 h of the field trip.

Grading system:

Exam 1 Meats	100 points
Exam 2 Meats	100 points
Exam 3 Eggs	100 points
Exam 4 Eggs	100 points
Participation	40 points

*Graduate Students taking course for “Graduate Credit” will be required to complete a special project as agreed upon by the student and major course instructors. Exams will be weighted at 70% of final grade, Special Project 20% of final grade, and Participation 10% of final grade.

Grading Scale:

Non-UW-Madison students

A	≥ 90%
B	≥ 80%
C	≥ 70%
D	≥ 60%
F	< 60%

UW-Madison students

A	≥ 93%
AB	≥ 88%
B	≥ 83%
BC	≥ 78%
C	≥ 70%
D	≥ 60%
F	< 60%

Attendance Policy and Make-up Exams:

Regular attendance is expected of all students. A grade of zero will be given for unexcused absences during an exam period. Contact the Midwest Poultry Consortium (Beth Nelson) to determine if an excused absence during any segments of the course can be allowed.

Morning Meats Week

Monday June 11	Tuesday June 12	Wednesday June 13	Thursday June 14	Friday June 15
Introduction	Fermentation	Thermal Processing NMIs	Exam 1 (8:15-9:15)	Courting the All Natural Consumer
Harvest	Curing	sausage thermal step (sofia) Loaves	Preservation	Hot Dogs
Harvest	Thermal Processing	Sticks	Culinary recipes 2nd set	Harvest Defects
Harvest	Debone	Discuss Raw sausage results	Cured sausage Competition Weigh dry ingredients	Ingredient Function Exercise

Lunch at FAL*

Lunch at FAL*

Afternoon-Meats Week

Syllabus Proteins	Pepperoni 1pm	Stuff/Clip Loaves	Lipids	
Water Binding	Cured sausage Add wet ingredients/mix/stuff	a_w and pH pepperoni	taste pepperoni deli loaves sticks	Cured sausage Competition add wet ingredients/mix/stuff
Intro to FAL	Culinary Recipes	Discuss thermal processed sausage results taste, next steps	Packaging 3pm	texture & color measurements
Cured sausage-weigh dry ingredients	1st set	NMIs Case Studies	10 Key concepts	Intro to Meat Microbiology (3pm)

An Sci Room 212

Poultry Research Lab

Food Applications Lab (FAL) Basement of Babcock Hall/Dairy Store

Meat Science Lab

***Bring your lunch on Thursday/Friday if you do not want to eat products made for the class**

EGGS SECTION

Monday June 18	Tuesday June 19	Wednesday June 20	Thursday June 21	Friday June 22
MORNING				
Exam 2 8:30-9:15am <ul style="list-style-type: none"> • Egg Industry • Shell Egg Formation and Structure • Shell Egg Processing and Composition • Shell Egg Quality - Deterioration and Preservation 	<ul style="list-style-type: none"> • Further Processed Products - Functionality • Breakers and Liquid Egg Preservation 	Exam 3 8:30-9:15am Meat Microbiology Egg Microbiology	Egg Microbiology Egg Regulations	Exam 4 8:00-8:45:am Field Trip Finish by 2pm
AFTERNOON				
<u>Laboratory</u> Exterior Egg Quality Interior Egg Quality* Cured sausage competition thermal step (Sofia)	<u>Laboratory</u> Angel Food Cake Egg White Foams Emulsions	Microbiology Lab	Microbiology Lab finalize Competition Winners gift bags	

*finish by 300 due to banquet

Labs in Room 257 of Meat Science Building

Lectures in Room 212 Animal Sciences

Textbooks

No text is required. The texts below are useful references.

- 1) The Science of Poultry and Meat Processing (Free Download) (Barbut, E-Book)
- 2) Egg Science and Technology (Stadelman and Cotterill, 1990)

Christie Kapsner-(GnP Regulations/HACCP at 1st Processing talk) 2015

https://mediaspace.wisc.edu/media/Christie+Kapsner+-+Processing+Food+Safety/0_m1k4r162