

SYLLABUS

Course Instructor:
Dr. S. K. Williams
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Course Communications

The best and most effective means of communicating with the instructor is the Canvas “Inbox” feature. I will respond to emails within 24 to 48 hours (max). Office hours are available by appointment. Email the instructor to request an appointment.

Course Time and Location

This is an online course. Therefore, course time and access to course materials is 24 hours daily, except for quiz and activity assignments. Please review the course schedule outlined in this syllabus.

Course Description

ANS 4932 Meat Processing emphasizes the principles for use of meat and poultry as the main center of the plate item and as ingredients in other food products. Food safety, ingredient technology, processing technology, culinary technology, meat/poultry inspection regulations and food labeling are introduced in this class. Independent hands-on activities are an intricate part of this course to provide experiential learning for the students and a unique introduction to meat and poultry processing and related food animal species.

Major Materials Needed for the Class

- Digital weighing scale with 100 - 1,000-gram capacity.
- Camera (your cell phone is sufficient) or webcam and microphone
- pH strips (can purchase from local hardware and/or department store)
- Food processor or any kitchen grinder type device.
- Plastic 8 to 16-ounce regular drinking cups.
- Three regular mixing bowls or similar type of containers to be used for a marination activity.
- One 8-ounce bottle of dishwashing liquid that contains disinfectant/sanitizer for clean-up after activities.

There are no laboratory fees for this class. However, you will be required to purchase the materials and supplies needed to conduct the assigned activities. The total cost should be approximately \$50.00 or less.

Course Objectives: After completion of this course, students should be able to:

- Summarize the principles of meat and poultry processing.
- List and explain factors that affect the growth of bacteria in their food.

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- Recognize United States Department of Agriculture (USDA) approved ingredients for use in meat and poultry products.
- Explain the role of smoking, packaging and casing technologies in the production of meat and poultry products.
- Explain the role of curing, emulsification and fermentation technologies in the production of meat and poultry products.
- Compare and contrast conventional poultry processing to farm-raised/free range poultry.
- Apply culinary arts and food safety practices to produce safe and consumer appealing food products.
- Compare and contrast natural, organic and conventionally produced poultry.
- Produce a meat or poultry product based on knowledge gained in the class.

Class Materials that are included in this online course:

- Recorded Meat and Poultry Processing lecture videos.
- Meat and Poultry Processing hands-on activities that correspond to the lectures.
- Activity sheets to be used in recording data for the assigned activities.
- Pertinent meat and poultry processing videos to enhance the student's learning experiences.

Required Course Textbook: None

Suggested References

1. Codes of Federal Regulations (CFR). 2019. Title 21. Food and Drug, Parts 100 – 190. Food labeling, food claims, food additives, etc.
2. Codes of Federal Regulations (CFR). 2019. Title 9. Animals and Animal Products, Chapter III Food Safety and Inspection Service, Parts 300-592. Electronic Code of Federal Regulations. Access at https://www.ecfr.gov/cgi-bin/text-idx?SID=eab8ee6de50d7c5f1635b476c9c6ec7d&mc=true&tpl=/ecfrbrowse/Title09/9cfrv2_02.tpl#300, e-CFR data is current as of June 23, 2020.
3. Hedrick, H., Forrest, J., Aberle, E. D. and Judge, M. D. 2001. Principles of Meat Science. W. H. Freeman and Co.

Course Structure

This course will involve lectures, quizzes, hands-on activities and discussion sessions. Materials needed for the class assignments are listed on Page 1 of the syllabus and with each activity. The course will provide learning experiences that will apply to the student's everyday experiences, as well as future careers in meat and poultry processing and food safety. This course will also have significant impact on the student's education in the areas of preparation, handling and safety considerations for meat, poultry and related food products. Interaction with classmates and the instructor is emphasized in this course to insure maximization of the student's learning experience.

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Grading Scale:

The final grade will be determined based on scores on module quizzes, hands-on activities, class discussions and one special project. The special project will include preparation of a product, and video of the product produced.

Total Points for the course will be 1121 points, which will include:

	Points	Percentage (%)
Class discussions	260	23.0
Module Quizzes	256	23.0
Hands-on activities	325	29.0
Special Project	280	25.0
Total Points	1121	100.0

Grade breakdown will be based on the following point totals:

	Grade	Points
A	95.1 to 100	1066-1121
A-	90.1 to 95.0	1010-1065
B+	85.1 to 90.0	954-1009
B	80.1 to 85.0	898-953
B-	75.1 to 80.0	842-897
C+	70.1 to 75.0	786-841
C	65.1 to 70.0	730-785
C-	60.1 to 65.0	674-729
D+	55.1 to 60.0	618-673
D	50.1 to 55.0	562-617
D-	45.1 to 50.0	506-561
E	<45.1	<506

UF Passing Grades and Grade Points Effective Summer A 2009:

Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
Grade Points	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.67	1.33	1.0	.67	0

Grades and Grade Points

For information on current UF policies for assigning grade points, see the [UF Undergraduate Catalog page on Grades and Grading Policies](#).

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Schedule for Lectures and Class Assignments

In general, lectures and YouTube videos will be open 24 hours daily for the duration of the course. The activities and quizzes will be opened at 8:00 a.m. and closed on the dates designated in the table below. All closing times are 11:59 p.m. for all assignments on the due date. Late work will not be accepted. No assignments are due on University of Florida designated holidays. An additional day will be given for activities that include a holiday within the closing date.

Lecture Schedule and Assignment Due Dates

Module	Assignment	Description	Open Date	Close Date*
Module 1 - What is Meat Processing?				
1	Watch Video	Welcome Video	Aug 31	
1	Introduce Yourself to the class	Introduce yourself to your classmates in the “Welcome to ANS 4932” Discussion	Aug 31	Sept 14
1	Read Syllabus	Become familiar with all material in syllabus	Aug 31	
1	Watch YouTube Video	How It’s Made: Deli Meats, https://www.youtube.com/watch?v=hesQfC0qn2s , 4:58 minutes	Aug 31	
1	Take Syllabus Quiz (Quiz 1)	Syllabus Quiz	Sept 8	Sept 10
1	Complete Activity 1	Meat Processing Questionnaire	Aug 31	Sept 7
1	Watch Lecture	Introduction to Meat Processing	Aug 31	
1	Complete Activity 2	Importance of Food Labels	Sept 3	Sept 9
1	Take Module 1 Quiz (Quiz 2)	Introduction to Meat Processing	Sept 4	Sept 6
Holiday, September 7, 2020 – Labor Day, No Class				
Module 2 - Food Safety and Preservation				
2	Watch YouTube Video	YouTube video: Salmonella contamination can spread from farms to processing plants to the chicken on your table , 3:13 minutes.	Sept 8	
2	Watch Lecture 1	Food Safety and Preservation: Farm to Table	Sept 8	
2	Complete Activity 1	Safe Handling Information	Sept 10	Sept 16
2	Take Quiz 3	Food Safety and Preservation: Farm to Table	Sept 14	Sept 16
2	Watch Lecture 2	Food Safety and Preservation: Intrinsic Factors	Sept 12	
2	Watch Lecture 3	Food Safety and Preservation: Extrinsic Factors	Sept 12	
2	Complete Activity 2	Inherent pH	Sept 14	Sept 20

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Module	Assignment	Description	Open Date	Close Date*
2	Post in Discussion for Activity 2	Inherent pH	Sept 14	Sept 20
2	Take Quiz 4	Intrinsic and Extrinsic Factors, Lectures 2 and 3	Sept 16	Sept 18
Module 3 – What’s in Your Food?				
3	Watch Lecture 1	Non-Meat Ingredients and Food Labeling	Sept 20	
3	Complete Activity 1	Identifying Product Labeling Components	Sept 22	Sept 28
3	Watch YouTube Video	YouTube: Kids Living With Food Allergies , 3:29 minutes	Sept 20	
3	Watch Lecture 2	Allergens in Meat and Poultry Products	Sept 20	
3	Complete Activity 2	“Raid Your Kitchen for Allergens	Sept 24	Sept 30
3	Complete Activity 3	Preparation of a Product Label	Sept 28	Oct 5
3	Take Quiz 5	What’s in Your Food?	Sept 26	Sept 28
Module 4 – Meat and Poultry Chemistry				
4	Watch Lecture 1	Factors that Affect Meat and Poultry Protein Functional Properties	Sept 27	
4	Complete Activity 1	Reading the Label: Nonmeat Ingredients that Affect Water holding Capacity	Sept 28	Oct 4
4	Take Quiz 6	Meat Chemistry, Lecture 1	Sept 30	Oct 3
4	Watch YouTube video	YouTube: How to Make Chicken Marinade , 2:10 minutes	Sept 27	
4	Watch Lecture 2	Marination Process for Meat and Poultry Products	Sept 27	
4	Complete Activity 2	Evaluation of Nonmeat Ingredients in Marinated Chicken Breasts: Marinating chicken breast meat Sensory Survey - Treatment 1: No water, no additives Sensory Survey - Treatment 2: Water only Sensory Survey - Treatment 3: Salt only Sensory Survey - Treatment 4: Lemon Juice only Sensory Survey - Treatment 5: Water + Salt + Lemon Juice	Sept 28	Oct 11
4	Post to Discussion Board for Activity 2	Evaluation of Nonmeat Ingredients in Marinade Solutions for Chicken Breast Fillets	Sept 28	Oct 11
4	Watch YouTube video	YouTube: Science of Meat Color , 3:06 minutes	Sept 30	
4	Watch Lecture 3	Muscle Color	Sept 30	

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No Class - University of Florida Homecoming, October 2-4, 2020				
Module	Assignment	Description	Open Date	Close Date*
4	Complete Activity 3	The effects of Species and storage on Muscle color (Myoglobin pigment) of ground beef and poultry products:	Oct 5	Oct 18
4	Post to Discussion Board for Activity 3	The effects of Species and storage on Muscle color (Myoglobin pigment) of meat and poultry products: Requires monitoring meat color for ten (10) days	Oct 5	Oct 18
4	Take Quiz 7	Meat Marination and Muscle Color, Lectures 2 and 3	Oct 6	Oct 8
Module 5 - Smoking, Packaging, and Casing				
5	Watch YouTube video	YouTube: How Liquid Smoke is Made , 2:44 minutes	Oct 6	
5	Watch Lecture 1	Smoking Technology for Processed Products	Oct 6	
5	Take Quiz 8	Smoking Technology	Oct 10	Oct 12
5	Watch YouTube video	YouTube: How To Make Bratwurst Sausages (using natural casing) , 3:38 minutes	Oct 6	
5	Watch Lecture 2	Casing Technology for Processed Products	Oct 6	
5	Watch Lecture 3	Packaging Technology for Processed Products	Oct 6	
5	Complete Activity 1	Casing and Packaging Exploration	Oct 9	Oct 15
5	Post to Discussion Board	Casing and Packaging Exploration	Oct 9	Oct 15
5	Take Quiz 9	Casing and packaging Technology	Oct 12	Oct 14
Module 6 - Curing, Emulsion, and Fermentation				
6 - Curing	Watch YouTube video	Watch YouTube video, Modern Ham Curing & Processing , 5:44 minutes	Oct 14	
6	Watch Lecture 1	Curing Technology for Meat and Poultry Products	Oct 14	
6	Complete Activity 1	Name that Ham!	Oct 16	Oct 22
6	Post on Discussion Board for Activity 1	Name that Ham!	Oct 16	Oct 22
6	Watch YouTube video	YouTube: How It's Made - Hot Dogs , 5:02 minutes	Oct 14	
6 - Emulsion	Watch lecture 2	Emulsion Technology	Oct 14	

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Module	Assignment	Description	Open Date	Close Date*
6	Complete Activity 2	Are All Hotdogs Created/Manufactured Equally?	Oct 18	Nov 1
	Post on Discussion Board for Activity 2	Are All Hotdogs Created/Manufactured Equally?	Oct 18	Nov 1
6 - Fermentation	Watch YouTube video	Watch YouTube video: Salami Processing Line - 2 - Velati Srl , 4:34 minutes	Oct 14	
6	Watch lecture 3	Fermentation Technology for Meat and Poultry Products	Oct 20	
6	Complete Activity 3	Fermented Sausage Exploration	Oct 21	Nov 2
6	Post on Discussion Board for Activity 3	Fermented Sausage Exploration	Oct 21	Nov 2
6	Take Quiz 10	Curing, Emulsion and Fermentation Technology for Meat and Poultry Products	Oct 22	Oct 24
Module 7 – Poultry Processing				
7	Watch YouTube video	YouTube: An Inside Look at U.S. Poultry Processing , 7:35 minutes	Oct 24	
7	Watch lecture 1	Conventional Poultry Processing	Oct 24	
7	Take Quiz 11	Conventional Poultry Processing	Oct 27	Oct 29
7	Watch YouTube video	Joel Salatin Processes Chickens - Mother Earth News Fair , 16:00 min.	Oct 24	
7	Watch lecture 2	On-Farm Poultry Processing	Oct 24	
7	Complete Activity 1	Are All Chickens the Same?	Oct 26	Nov 9
7	Post on Discussion Board for Activity 1	Are All Chickens the Same?	Oct 26	Nov 9
7	Take Quiz 12	On-Farm Poultry Processing	Oct 28	Oct 30

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Module	Assignment	Description	Open Date	Close Date*
Module 8– Make Your Own Product				
8	Watch Lecture 1	Special Project Production: Factors to consider for the development of a formulation/recipe for meat and poultry products	Oct 1	
8	Watch YouTube video	“Product - Development Stages”, 10:16 minutes	Oct 1	
8	Watch YouTube video	How to make an awesome Food Tube video with Jamie Oliver & Uncle Ben's , 4:54 minutes	Oct 1	
8	Watch YouTube video	Homemade Seafood Paella - Spain Recipe - Cooking with Alia - Episode 341, 8:49 minutes.	Oct 1	
8	Watch Lecture 2	Culinology in Meat and Poultry Processing	Oct 1	
8	Complete Activity 1	The Ideal Product for Me: Brainstorming Session *	Oct 1	Oct 7
8	Take Quiz 13	Product Development and Culinology	Oct 6	Oct 8
8	Instructor Review	Teacher reviews Brainstorming assignment	Oct 7	Oct 9
8	Instructor returns Brainstorming Lab to all students		Oct 10	Oct 10
Holiday, Veterans Day, November 11, 2020				
8	Complete Activity 2	Product Plan: My Final Approved Formulation	Oct 12	Oct 18
It's Time To Begin Gathering And Purchasing All Ingredients For Your Product				
8	Complete Activity 3	Create and Evaluate Your Product, and Make Your Video a. Get ready to make your video. b. Gather all ingredients to make your product. c. Review your script. d. Create your product following your Module 8 Activity 2: Product Plan guidelines e. Conduct Sensory evaluation of your product f. Conduct all analyses as outlined in your Product Plan	Oct 18	Nov 24
8	Complete Activity 4	a. Share Your Video with the Class b. Review 2 of your classmates' videos and share a written discussion of them.	Oct 18	Nov 24
8	Complete Activity 5	a. Written discussion of Product Development and Video Preparation Experiences	Oct 18	Nov 24
Holiday, November 25-29, 2020, Thanksgiving; UF classes end, December 9, 2020				

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Summary of Activities, Discussions and Rubrics included in this course:

Module	Activity	Discussion and Points	Rubrics/ Criteria*	Points for Activities	Description of Activities
1	1			5	Welcome to ANS 4932 Discussion
1	1	-		0	Meat Processing Questionnaire
1	2	-	C	20	Importance of Food Labels
2	1	-		20	Safe Handling
2	2	D(30)	R	20	Inherent pH
3	1	-	-	20	Identifying Nonmeat Ingredients
3	2	-	-	20	Raid Your Kitchen for Allergens
3	3	-	-	20	Preparation of A Product Label
4	1	-	C	20	Reading the Label-Nonmeat Ingredients that Affect Water Holding Capacity
4	2	D(40)	R	30	Marinade data, Sensory survey
4	3	D(40)	R	30	Effects of Species and Storage on Muscle Color
5	1	D(40)		20	Casing and Packaging Exploration
6	1			20	Name that Ham
6	2	D(40)	R	30	Are All Hotdogs Equal
6	3	D(40)	R	20	Fermented Sausage Exploration
7	1	D(30)	R	30	Are all Chickens the Same?
Total Points for Modules 1-7		260		325	
Special Project – Module 8:					
8	1	-	R	40	Ideal Product for Me: Brainstorming
8	2	-	R	40	My Final Formulation
8	3	-	R	50	Sensory Evaluation of My Product
8	4	-	R	50	Preparation of My Video
8	5a	50	R		Final Project written Presentation
8	5b	D(50)	R	-	Sharing and Discussion of My Video with the Class
Total Points Module 8		100	180	Total = 100 +180 = 280 points for special project	
*R=Rubric; C=Criteria					

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Summary of Quizzes included in this course:

Learning Module	Quizzes	Day/Date	Points	Description of Quiz
1	1		9	Syllabus
1	2		20	Introduction to Meat Processing
2	3		20	Food Safety and Preservation, Lecture 1
2	4		20	Food Safety and Preservation, Lectures 2-3
3	5		22	What's in Your Food?
4	6		23	Meat Chemistry, Lecture 1
4	7		18	Meat Chemistry: Marination and Muscle Color, Lectures 2-3
5	8		20	Smoking Technology
5	9		24	Casing and Packaging Technology
6	10		20	Curing, Emulsion, Fermentation Technology
7	11		20	Conventional Poultry Processing
7	12		20	On-Farm Poultry Processing
8	13		20	Product Development and Culinology
Total Quiz Points			256	

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Make-Up Policy

In order to make-up a quiz, activity, or other class assignments, official written verification of illness, athletic events and university sponsored events or other absences must be presented to instructor. The instructor reserves the right to administer an alternate assignment. All make-ups must be completed within one week of the original event.

Academic Honesty

In 1995 the UF student body enacted an honor code and voluntarily committed itself to the highest standards of honesty and integrity. When students enroll at the university, they commit themselves to the standard drafted and enacted by students.

The Honor Pledge: We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.

On all work submitted for credit by students at the university, the following pledge is either required or implied: **"On my honor, I have neither given nor received unauthorized aid in doing this assignment."**

The university requires all members of its community to be honest in all endeavors. A fundamental principle is that the whole process of learning and pursuit of knowledge is diminished by cheating, plagiarism and other acts of academic dishonesty. In addition, every dishonest act in the academic environment affects other students adversely, from the skewing of the grading curve to giving unfair advantage for honors or for professional or graduate school admission. Therefore, the university will take severe action against dishonest students. Similarly, measures will be taken against faculty, staff and administrators who practice dishonest or demeaning behavior.

Students should report any condition that facilitates dishonesty to the instructor, department chair, college dean, Student Honor Council, or Student Conduct and Conflict Resolution in the Dean of Students Office. Source: [UF Graduate Catalog](#)

It is assumed all work will be completed independently unless the assignment is defined as a group project, in writing by the instructor. This policy will be vigorously upheld at all times in this course.

Software Use

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Online Course Evaluation Process

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. These evaluations

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are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open for students to complete during the last two or three weeks of the semester. Students will be notified of the specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results>.

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. Both the Counseling Center and Student Mental Health Services provide confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance. The Counseling Center is located at 301 Peabody Hall (next to Criser Hall). Student Mental Health Services is located on the second floor of the Student Health Care Center in the Infirmary.

- [*University Counseling Center*](#), 301 Peabody Hall, 392-1575
- [*Career Resource Center*](#), CR-100 JWRU, 392-1601 ext. 0
- [*Student Mental Health Services*](#), Rm. 245 Student Health Care Center, 392-1171
 - Alcohol and Substance Abuse Program (ASAP)
 - Attention Deficit Hyperactivity Disorder (ADHD)
 - Center for Sexual Assault / Abuse Recovery & Education (CARE)
 - Eating Disorders Program
 - Employee Assistance Program
 - Suicide Prevention Program

Students with Disabilities

The [Disability Resource Center](#) coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. 0001 Reid Hall, 392-8565,

Other Issues

Please see the [University of Florida Student Guide](#) for specific questions concerning your college experience.

Student Complaint Process

If a student wishes to file a complaint about the course, the student should access the following website for the appropriate instructions and documents:

https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf