

ANS 4635C MEAT PROCESSING FALL 2025

SYLLABUS

<u>Instructor</u> Kyle Mendes Office: 224 Animal Sci. Bldg. 459 Cell Phone: 209-556-7499 Office Hours: Door always open E-mail: kmendes15@ufl.edu	
Lecture:	Thursday (10:40 a.m. – 11:30 a.m.), Room ANS 156
Laboratory:	Tuesday (12:50 p.m. – 3:50 p.m.), Room ANS 151, Meat Research Lab Room 249 and/or Meat Processing Facility
Class Location: Room 156 Animal Sciences	
3 Credit Hours	

Course Description:

ANS 4635C includes two lectures and one laboratory exercise per week emphasizing principles for use of meat and poultry as food, process technology, culinary technology, meat/poultry inspection regulations and labeling, quality control procedures and marketing aspects.

Course Objectives: After completion of this course, students will have acquired:

- Hands-on experience in the manufacturing of meat and poultry products.
- Knowledge of quality control functions performed in meat and poultry processing facilities.
- Knowledge of culinary technology applications for meat and poultry products.
- Knowledge of the governmental agencies, inspection regulations and labeling policies associated with meat and poultry processing.

Required Class Materials:

Meat and Poultry Processing PowerPoint Presentations

Meat and Poultry Processing Laboratory Manual

The PowerPoint presentations and lab manual will be provided online by the instructor.

Suggested References

1. Codes of Federal Regulations (CFR). 2017. Title 21. Food and Drug, Parts 100 – 190 (food labeling, food claims, food additives, etc.). Access at <https://www.ecfr.gov/cgi-bin/ECFR?page=browse>
2. Codes of Federal Regulations (CFR). 2014. Title 9. Animals and Animal Products, Chapter III Food Safety and Inspection Service, Parts 300-592. Access at <https://www.ecfr.gov/cgi-bin/ECFR?page=browse>
3. Hedrick, H., Forrest, J., Aberle, E. D. and Judge, M. D. 2001. Principles of Meat Science. W. H. Freeman and Co.
4. Stadelman, W. J., Olson, V. M., Shemwell, G. A. and Pasch, S. 1988. Egg and Poultry- Meat Processing. VCH Publishers.
5. Romans, J. R., Costella, W. J., Carlson, W. W., Greaser, M. L. and Jones, K. W. 2000. The Meat We Eat. 14th ed. Prentice Hall.
6. Pearson, A. M. and Tauber, F. W. 1984. Processed Meats. 2nd ed., Van Nostrand Reinhold Co.

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Course Structure

This course will involve two lectures and one laboratory activity per week. Students will be divided into groups as designated by the instructor, and each group will prepare a laboratory report for each of the 8 laboratory exercises using the information provided in the Meat and Poultry Processing Laboratory Manual. Laboratory attendance is **mandatory**.

Special Project: Students will work in groups to develop a new meat, poultry or seafood product utilizing USDA and USFDA regulations. Students will determine packaging, marketing strategies, cost, storage conditions and food safety guidelines for the product.

Evaluation of Grades

Assignment	Total Points
Exams 2@ 100 points each	200
Lab reports 8 @ 50 points each	400
Special Project 1 @ 300 points each	300
TOTAL	900

Grading Policy:

Grade	%
A	93.0 to 100
A-	90.0 to 92.9
B+	87.0 to 89.9
B	83.0 to 86.9
B-	80.0 to 82.9
C+	77.0 to 79.9
C	73.0 to 76.9
C-	70.0 to 72.9
D+	67.0 to 69.9
D	63.0 to 66.9
D-	60.0 to 62.9
E	<59.9

Grades and Grade Points

For information on current UF policies for assigning grade points, see <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Attendance and Make-Up Work

Laboratory attendance is mandatory, and 2.5 points for each laboratory exercise will be given for attendance. The university recognizes the right of the individual professor to make attendance mandatory. After due warning, professors can prohibit further attendance and subsequently assign a failing grade for excessive absences. Please read attendance information found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

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DATE	LECTURE	LABORATORY ACTIVITY
8-21	Introduction and lecture	N/A
8-26	Food Safety, Sanitation and Preservation	N/A
8-28	Food Safety, Sanitation and Preservation	N/A
9-2	Meat Block Selection	N/A
9-4	Allergens	N/A
9-9	Meat Chemistry: Water holding Capacity of Muscle Protein	Lab – Grocery Store Audit
9-11	Muscle Color	N/A
9-16	Marination Technology	Lab – Tour of Meat Lab/ Food Safety Lab
9-18	(Food Safety, Nonmeat Ingredients, Meat Chemistry, Marination; Muscle Color, Poultry Processing)	N/A
9-23	Packaging and Casings	Lab - Production of Ground Beef Patties
9-25	Allergens in Meat and Poultry Processing	N/A
9-30	Smoking Technology; Curing Technology	Lab – Evaluation of Ground Beef Patties
10-2	Calculations for cooked sausage and cured hams:	N/A
10-7	Special Project Introduction	Lab –Production of Hot dogs
10-9		
10-14	Poultry Processing: Conventional and Pastured Poultry	Lab Evaluation of Hot dogs
10-16	EXAM II (Packaging and Casings, Smoking, Curing, Allergens, Fermentation, emulsion)	N/A
10-21		Lab- Summer Sausage
10-23	Guest Lecture on Equipment	N/A
10-28	Emulsion Technology	Lab 5a - Production of Ham
10-30		N/A
11-4	Lab -Country Meats Tour; Special project ingredient list due	Lab – Ham Evaluation and Slice Yield
11-6	Organic and Natural Foods	
11-11	No Class	
11-13	Project Preparation	
11-18	Project Preparation	
11-20	Project Preparation	
11/25-27	Thanksgiving Break	
12-2	Project Preparation	
12/9-14	Finals	

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GUIDELINES FOR PREPARING LAB REPORTS

LABORATORY REPORT FORMAT

1. Student's Name
2. Date
3. Group Number and Group Members
4. Title of Experiment
5. Purpose: A statement of the purpose of the experiment should be made. This should be no more than one to three sentences (maximum).
6. Materials and Methods:
7. Results and Discussion: Include all raw data, and the final data for each experiment. Write a complete discussion of the results given in your summary tables. Your discussion should be a logical explanation of the results. Explanations can usually be found in meat, poultry or food science textbooks, journals or class notes. If you are unable to find an explanation, you may formulate your own if it is logical. Be sure to discuss all parameters calculated in your summary tables. Respond to all questions and/or requests listed by the instructor at the end of each laboratory exercise.
8. Conclusion/Summary
9. References: Use references in your discussion. List all references that you used to prepare your report. Text citation and bibliography should be in the style of the Journal of Food Science, Animal Science or Poultry Science.

GRADING

Grading for laboratory exercises is as follows:

Attendance	10 points
Materials and Methods, Purpose and References	20 points
Data, Discussion and Conclusion(s)	<u>20 points</u>
Total Points	50

THINGS TO REMEMBER

1. Except for raw data collected during lab, all lab report information must be typed. Raw data should be legibly handwritten and attached to lab reports.
2. You must discuss your data. Give reasons for your findings and compare to references.
3. Reports are due at the next lab period following the completion of each experiment, unless otherwise instructed.
4. Late reports will have **TWO (2) POINTS PER LATE DAY (INCLUDING WEEKENDS) SUBTRACTED FROM Your Total LAB SCORE** (i.e., after 5 days, the report grade will have decreased by 10 points). After the 20 points have been exhausted, two points per day will be subtracted from your final grade until the report is submitted.
5. Missing Lab Data: If your lab report is incomplete because of missing data which might be due to a group member not recording, forgetting to record the data, forgetting to check sample, or etc., each member in the group will receive - (minus) 5 points from her/his lab report as a penalty. I would advise that the group retain a sample for re-testing until the analysis is complete and all data is recorded, if necessary, to avoid this penalty.
6. Laboratory Absence: You are expected to attend and participate in all laboratory activities. Roll will be called and 2.5 points will be deducted from your laboratory score for each absentee. In the event that you miss a lab you will need to get the data from your group member(s). If you skip labs, and/or your group feels that you are not participating in the laboratory activities, then your group is not obligated to give you their lab data. Always remember that you learn by doing, and this is the purpose of laboratory activities.

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Laboratory Policies: Laboratory policies are designed for your safety, and the production of safe, wholesome and unadulterated food products. Our processing facilities are USDA inspected. All guidelines, policies and procedures pertaining to a USDA inspected facility are practiced and adhered to in our facilities from pre-slaughter through final product sales in our retail store. Because of the seriousness of these policies, any student violating any of the following policies will receive a **5-point penalty** (i.e., **5 points** will be deducted from your laboratory report for the penalty that occurred during that particular laboratory activity).

Equipment Required for Laboratory

1. Rubber boots or shoes with rubber soles to avoid slipping. **NO SANDALS OR OPEN-TOE SHOES.**
2. Older clothes that will be washed each week -- no sleeveless shirts or blouses!
3. **NO SHORT PANTS!**

Laboratory Rules for Safety and Sanitation

1. Hard hats and lab coats will be provided and must be worn when working in the meat processing and meat research laboratories. You are responsible for keeping the hard hats clean.
2. Students will use safety equipment when required. This equipment is provided.
3. Except for wedding rings/bands, no jewelry is allowed. However, be aware that rings of any sort may accidentally become entangled in equipment ridges/grooves, etc. and cause severe damage or loss of fingers. It is for this reason that the instructor recommends that all jewelry including wedding rings/bands be removed prior to entering the processing laboratory.
4. No eating or use of tobacco products in the meat processing laboratory is allowed.
5. Above all, use common sense around the meat lab to protect yourself and others around you.
6. If you see other students, staff or faculty not adhering to these rules, it is your duty to remind them of their responsibility to safety.

Academic Policies and Resources

Academic policies for this course are consistent with university policies. See <https://syllabus.ufl.edu/syllabus-policy/uf-syllabus-policy-links/>

Campus Health and Wellness Resources

Visit <https://one.uf.edu/whole-gator/topics> for resources that are designed to help you thrive physically, mentally, and emotionally at UF. Please contact UMatteWeCare for additional and immediate support.

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.