

ANS 3634C – Meats
Fall 2023
3 credit hours

Course description: Integrated studies of the science and technology involved in the utilization of meat animals for food with focus on animal growth, carcass cutability, wholesomeness, palatability, and merchandising of red meat.

Instructor:

Chad Carr, PhD

Office: 224B Animal Science Bldg (459)

Office phone: 352-392-2454

Office hours: open door policy, but make an appointment to guarantee availability

chadcharr@ufl.edu

Lecture: Tuesday & Thursday, Period 1 (8:30 – 9:20 am)

Lab: Thursday, Period 5 & 6 (11:45-1:40; section 10358) and 7 & 8 (1:55-3:50; section 10359)

Location: Animal Science Building, Room 156

Test 3: Friday December 15 @ 10 AM - Noon

Course objectives:

Upon completing this course, students should be able to:

1. Describe the principles of meat inspection, microbiology, and food safety programs
2. Describe anatomy of carcasses and major tissues, and their significance to meat merchandizing and utilization
3. Explain muscle function and the biochemical processes involved in the conversion of muscle to meat
4. Explain ante- and postmortem handling factors that influence meat quality characteristics and palatability
5. Describe steps and principles involved in slaughter of meat animals, and in particular, their relation to animal welfare, food safety, and meat quality
6. Explain principles of carcass fabrication and identify wholesale and retail cuts
7. Discuss breeding, nutritional, and other management practices that impact carcass composition and quality

Optional Texts:

Lawrie's meat science (8th ed.) Toldrá. Woodhead Publishing.

Principles of Meat Science. 2012. Aberle, Forrest, Gerrard, & Mills. Kendall Hunt Publishers.

Course Website

The Canvas website will contain the syllabus, class notes, and resources such as readings and lessons. Class notification emails will be sent via the course website.

Course Grading:

Lecture exams:

1. October 3
2. November 9

Lab quizzes:

1. September 21st
2. October 26th

Lab quiz + Test 3- Friday December 15 @ 10 AM - Noon

Grades will be based on:

Laboratory	Pts	Lecture	Pts
Quiz 1	75	Exam 1	125
Quiz 2	75	Exam 2	125
Lab worksheets- 13	50	Cumulative Final	200
		Class attendance	50
Total points (lab + lecture) = 700			

Attendance will be taken on at least 20 days, worth up to 50 total points. You will not be able to receive more than 50 points for attendance. Completion of each week's lab assignment will be worth 4.12 points each. All lab reports should be uploaded to Canvas by the Tuesday following lab at noon.

Grades determined as follows (based on % of total possible points):

A	90 & Above
B+	85 – 89.99
B	80 – 84.99
C+	75 – 79.99
C	70 – 74.99
D+	65 – 69.99
D	60 - 64.99
F	59.99 & Below

This is a link to the university grades and grading policies <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

Lecture Schedule

Date		Lecture topic
Th	8-24	Course overview/ Global meat supply chain
T	8-29	Meat inspection overview- Food Safety System/HACCP
Th	8-31	Slaughter inspection
T	9-5	Microbiology
Th	9-7	Food safety interventions
T	9-12	Producer / packer problems
Th	9-14	Carcass components & growth
T	9-19	Muscle structure
Th	9-21	Muscle structure & function
T	9-26	Muscle contraction
Th	9-28	Muscle contraction & energy
T	10-3	Exam 1
Th	10-5	Conversion of muscle to meat – intro
T	10-10	Conversion of muscle to meat – rigor
Th	10-12	Conversion of muscle to meat – defects
T	10-17	Fiber types
Th	10-19	Antemortem factors affecting quality, yield, and palatability- Tenderness juiciness, WHC, flavor
T	10-24	Antemortem factors affecting quality, yield, and palatability
Th	10-26	Postmortem factors affecting quality, yield, and palatability Fat quality oxidation
T	10-31	Postmortem factors affecting quality, yield, and palatability
Th	11-2	Postmortem factors affecting quality, yield, and palatability
T	11-7	Quantifying quality
Th	11-9	Exam 2
T	11-14	Meat color
Th	11-16	Meat processing
T	11-21	Meat processing- LIVE ZOOM
Th	11-23	THANKSGIVING – No class
T	11-28	Meat in the diet
Th	11-30	Meat in the diet
T	12-5	Meat treat day/ Course wrap up
		Friday December 16 @ 7:30 AM -9:30 AM

Lab Schedule

Lab	Date	Subject
1	8-24	Meat lab tour & food safety
2	8-31	Anatomy
3	9-7	Beef Slaughter/ Slaughter Yields
4	9-14	Pig slaughter
5	9-21	(Quiz 1) Pork carcass fabrication
6	9-28	Cutability
7	10-5	Beef forequarter
8	10-12	Beef hindquarter
9	10-19	Lamb slaughter
10	10-26	(Quiz 2) Lamb fabrication
11	11-2	Processing
12	11-9	Meat cookery and sensory
13	11-16	Cooking & eating
14	11-23	Thanksgiving Break – No Class
15	11-30	Processed meat & Review

The only labs you will not be required to wear long pants and are the first lab, the anatomy lab, the cookery and sensory lab, the cooking and eating lab, and the audit presentations

All other labs be prepared for either the slaughter floor (hot & dirty) or cutting (cold).

- Pants and shirt must be washed after each use to maintain cleanliness.
- Rubber footwear will be worn during all laboratory periods that involve participation on the slaughter floor, in the cutting room, or in the cooler. You are responsible for acquiring rubber footwear (**required by 8/31**).
- The meat laboratory provides safety helmets, rubber aprons, and safety gloves. You will borrow an employee/meat lab knife as well
- Since this equipment will be used by students in other lab periods, you are responsible for cleaning it and placing it in the proper location for subsequent laboratory period.

Attendance policy:

Requirements for class attendance and make-up exams, assignments, and other work are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

The following are considered authorized (excused) absences if the indicated conditions are met:

University approved field trip or activity: These must be cleared at least one week in

advance of the major examination. If not cleared in an appropriate fashion, a grade of zero will be assigned for the missed examination.

Death or serious illness in the family: A letter of explanation from the physician or minister who attended the patient or was in charge of the funeral services, respectively, must verify this. This letter must be within 14 days following the missed examination or the grade of zero will be assigned.

Personal illness that is too severe or contagious for the student to attend class: A letter of explanation from a physician on official letterhead must verify this. This letter must be within 14 days following the missed examination or the grade of zero will be assigned.

Legal procedure, administrative procedure, or military duty: The instructor must be notified at least one week in advance of the major examination and have a verification letter on official letterhead. If not cleared in an appropriate fashion, a grade of zero will be assigned for the missed examination.

Religious observance: The instructor must be notified at least one week in advance of the major examination. If not cleared in an appropriate fashion, a grade of zero will be assigned for the missed examination.

Mandatory admission interview for professional school which cannot be rescheduled: The instructor must be notified at least one week in advance of the major examination and have a notification from the appropriate individual on official letterhead. If not cleared in an appropriate fashion, a grade of zero will be assigned for the missed examination.

Digital devices (cell phones, laptops, tablets):

Students are asked to silence their cellular phones before entering the classroom. In order to accommodate all learning styles, students may use laptops or tablets for the purpose of taking notes. If students are found to be Facebooking or texting, they will be asked to turn off their digital device.

General Information:

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/> . Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/> . Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

Health and Wellness

U Matter, We Care: If you or someone you know is in distress, please contact umatter@ufl.edu , 352-392-1575, or visit U Matter, We Care website to refer or report a concern and a team member will reach out to the student in distress.

Counseling and Wellness Center: Visit the Counseling and Wellness Center website or call 352-392-1575 for information on crisis services as well as non-crisis services.

Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need, or visit the Student Health Care Center website.

University Police Department: Visit UF Police Department website or call 352-392-1111 (or 9-1-1 for emergencies).

UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; Visit the UF Health Emergency Room and Trauma Center website.

GatorWell Health Promotion Services: For prevention services focused on optimal wellbeing, including Wellness Coaching for Academic Success, visit the GatorWell website or call 352-273-4450.

Academic Resources

E-learning technical support: Contact the UF Computing Help Desk at 352-392-4357 or via e-mail at helpdesk@ufl.edu.

Career Connections Center: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.

Library Support: Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center: Broward Hall, 352-392-2010 or to make an appointment 352-392-6420. General study skills and tutoring.

Writing Studio: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.

Student Complaints On-Campus: Visit the Student Honor Code and Student Conduct Code webpage for more information.

On-Line Students Complaints: View the Distance Learning Student Complaint Process Policy on Course Syllabi 4