

**ANS 3634C – Meats**  
**Fall 2021**  
**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](mailto:chadcharr@ufl.edu)

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

**Lab:** Thursday, Period 6 & 7 (12:50 – 2:45 pm; section 10539) OR

Thursday, Period 8 & 9 (3:00 – 4:55 pm; section 10540)

**Location:** Animal Science Building, Room 156

**Final:** 12/14/2021 @ 8:00 PM - 10:00 PM

**Teaching assistants:**

Chloe Gingerich

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Michael Fioretto

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**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 (8<sup>th</sup> 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.

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#### Course Grading:

##### Lecture exams:

1. September 30
2. November 11
3. December 14 @ 8:00 PM -10:00 PM

##### Lab quizzes:

1. September 23<sup>th</sup>
2. October 28<sup>th</sup>
3. December 2<sup>nd</sup>

Grades will be based on:

Laboratory	Pts	Lecture	Pts
Quiz 1	50	Exam 1	100
Quiz 2	50	Exam 2	100
Quiz 3	50	Cumulative Final	200
Lab worksheets- 13	50	Class attendance	50
Retail audit	50		
Total lab	250	Total lecture	450
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 3.85 points each. All lab reports are 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

	<b>Date</b>		<b>Lecture topic</b>
1	T	8-24	Course overview/ Global meat supply chain
	Th	8-26	Meat inspection overview- Food Safety System/HACCP
2	T	8-31	Slaughter inspection
	Th	9-2	Microbiology
3	T	9-7	Food safety interventions
	Th	9-9	Producer / packer problems
4	T	9-14	Carcass components & growth
	Th	9-16	Muscle structure
5	T	9-21	Muscle structure & function
	Th	9-23	Muscle contraction
6	T	9-28	Muscle contraction & energy
	<b>Th</b>	<b>9-30</b>	<b>Exam 1</b>
7	T	10-5	Conversion of muscle to meat – intro
	Th	10-7	Conversion of muscle to meat – rigor
8	T	10-12	Conversion of muscle to meat – defects
	Th	10-14	Fiber types
9	T	10-19	Antemortem factors affecting quality, yield, and palatability- Tenderness juiciness, WHC, flavor
	Th	10-21	Antemortem factors affecting quality, yield, and palatability
10	T	10-26	Postmortem factors affecting quality, yield, and palatability Fat quality oxidation
	Th	10-28	Postmortem factors affecting quality, yield, and palatability
11	T	11-2	Postmortem factors affecting quality, yield, and palatability
	Th	11-4	Meat color
12	T	11-9	Meat processing
	<b>Th</b>	<b>11-11</b>	<b>Exam 2</b>
13	T	11-16	Meat processing
	Th	11-18	Meat processing
14	T	11-23	Processed meat
	Th	11-25	<b>THANKSGIVING – No class</b>
15	T	11-30	Meat in the diet
	Th	12-2	Meat in the diet
16	T	12-7	Meat treat day/ Course wrap up
			Final 12/14/2021 @ 8:00 PM - 10:00 PM

## Lab Schedule

<b>Lab</b>	<b>Date</b>	<b>Subject</b>
1	8-26	Meat lab tour, knife safety, food safety
2	9-2	Beef Slaughter/ Slaughter Yields
3	9-9	Anatomy
4	9-16	Pig slaughter
5	9-23	<b>(Quiz 1)</b> Pork carcass fabrication
6	9-30	Meat cookery and sensory
7	10-7	Cooking & eating
8	10-14	Lamb slaughter
9	10-21	Lamb fabrication
10	10-28	<b>(Quiz 2)</b> Beef forequarter
11	11-4	Beef hindquarter
12	11-11	<b>Veterans Day- No Class</b>
13	11-18	Meat Processing
14	11-25	<b>Thanksgiving Break – No Class</b>
15	12-2	Audit Presentations <b>(Quiz 3)</b>

**Equipment:**            1 scabbard  
                                  1 pair rubber boots  
                                  1 knife & sharpener

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 9/1**).
- As a general rule, you will need to bring your knives to labs if rubber footwear is required (this means we will be on the slaughter floor or in the cutting room).
- The meat laboratory provides safety helmets, rubber aprons, and safety gloves.
- 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/>.

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

## Health and Wellness

U Matter, We Care: If you or someone you know is in distress, please contact [umatter@ufl.edu](mailto: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](mailto: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