

**ANS 3634C – Meats**  
**Fall 2019**  
**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 (7:25 – 8:15 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

**Teaching assistant:**

Morgan McKinney

[mckinneym@ufl.edu](mailto:mckinneym@ufl.edu)

**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.

## **Course Grading:**

Lecture exams:

1. October 1<sup>st</sup>
2. November 7<sup>th</sup>
3. Final – Dec (TBD)

Lab quizzes:

1. September 19<sup>th</sup>
2. October 24<sup>th</sup>
3. November 21<sup>th</sup>

**Grades will be based on:**

<b>Laboratory</b>	<b>Pts</b>	<b>Lecture</b>	<b>Pts</b>
Quiz 1	45	Exam 1	100
Quiz 2	40	Exam 2	100
Quiz 3	40	Final	125
Participation, lab worksheets	15	Class participation	20
Lab assignments	15	----	
Total lab	155	Total lecture	345
Total points (lab + lecture) = 550			

**Participation, lab worksheets (lab):** Points will be awarded based on attendance and engagement in lab activities, and completion of worksheets during lab or other assignments (such as short pre- or post-lab quizzes in canvas)

Example scale, participation: Full points = preset in lab, actively participating in assigned task; Half credit = present, but not active or communicating with team; No credit = unexcused absence \*\*If you have  $\geq 2$  excused absences for lab, you will need to complete an assignment in order to receive full credit for participation for these labs. See instructor for further details regarding your assignment.

**Lab assignments:** worksheets during lab or other assignments (such as 'mini' pre- or post-lab quizzes in canvas)

**Participation (class):** Course participation/attendance will be recorded using informal, in-class activities. Completion of the in-class activity will result in credit for the day. As there are 29 class days but only 20 points awarded for attendance, there will be no make-ups for missing class.











































**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






## Lecture Schedule

	<b>Date</b>		<b>Lecture topic</b>
1	T	8-20	Course overview/meat economics
	Th	8-22	Meat inspection overview
2	T	8-27	Carcass components
	Th	8-29	Muscle structure
3	T	9-3	Muscle structure & function
	Th	9-5	Muscle contraction
4	T	9-10	Muscle contraction & energy
	Th	9-12	Conversion of muscle to meat – intro
5	T	9-17	Conversion of muscle to meat – rigor
	Th	9-19	Conversion of muscle to meat – defects
6	T	9-24	Fiber types
	Th	9-26	Exam review
<b>7</b>	<b>T</b>	<b>10-1</b>	<b>Exam 1</b>
	Th	10-3	Tenderness
8	T	10-8	Tenderness
	Th	10-10	Color
9	T	10-15	Fat quality
	Th	10-17	Oxidation
10	T	10-22	Meat inspection/food microbiology
	Th	10-24	Food microbiology/industry food safety practices
11	T	10-29	Industry technologies
	Th	10-31	Current events
12	T	11-5	Exam review
	<b>Th</b>	<b>11-7</b>	<b>Exam 2</b>
13	T	11-12	Introduction to meat processing
	Th	11-14	Processed meat
14	T	11-19	Meat in the diet
	Th	11-21	What do you want to know?
15	T	11-26	
	Th	11-28	THANKSGIVING – No class
16	T	12-3	Meat treat day/ Course wrap up

## Lab Schedule

Lab	Date	Subject	Lab exercise**	Required dress
1	8-22	Meat lab tour, knife safety, food safety	--	No special req.
2	8-29	Beef Slaughter/ Slaughter Yields	3	  
3	9-5	Anatomy	3	  
4	9-12	Pig slaughter	4	  
5	9-19	<b>(Quiz 1)</b> Pork carcass fabrication	6	   
6	9-26	Byproducts	C	  
7	10-3	Meat cookery and sensory	C	No special req.
8	10-10	Lamb slaughter	9	  
9	10-17	Lamb fabrication	11	   
10	10-24	<b>(Quiz 2)</b> Cooking Contest	12	  
11	10-31	Quality & carcass evaluation	5	   
12	11-7	Beef forequarter	14	   
13	11-14	Beef hindquarter	14	   
14	11-21	<b>(Quiz 3)</b> Meat processing	7,8	   
15	11-28	Thanksgiving Break – No Class	--	

**Lab exercise:** Number refers to chapter in required text. Material in chapter may be used for lab assignments, quizzes, and make-up labs.  
C = additional material provided on Canvas

**Required dress:** Clothes:  = shirt with sleeves  = long pants/jeans (no shorts)  
Footwear:  = rubber boots  = closed toe shoes  
Temperature:  = cold (temp < 50° F)

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

- 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 8/29**).
- 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.

**\*\*If you have  $\geq 2$  excused absences for lab, you will need to complete an assignment in order to receive full credit for participation for these labs. See instructor for further details regarding your assignment.**

### **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:**

### **Online course evaluation**

Students assessment of instruction is a critical part of efforts to improve teaching and learning practices. Students are encouraged to provide feedback on the quality of instruction in this course by completing online evaluations at <http://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <http://evaluations.ufl.edu/results>.

### **Student Complaint Process**

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

- Residential Course: [https://www.dso.ufl.edu/documents/UF\\_Complaints\\_policy.pdf](https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf)

### **Academic Honesty**

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following 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."*

You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied:

*"On my honor, I have neither given nor received unauthorized aid in doing this assignment."*

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code>.

### **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

### **Services available to students with disabilities**

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, [www.dso.ufl.edu/drc/](http://www.dso.ufl.edu/drc/)) by providing appropriate

documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

### **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. The Counseling & Wellness Center provides 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.

- **University Counseling & Wellness Center**, 3190 Radio Road, 352-392-1575, [www.counseling.ufl.edu](http://www.counseling.ufl.edu)  
Counseling Services  
Groups and Workshops  
Outreach and Consultation  
Self-Help Library  
Wellness Coaching
- **U Matter We Care**, [www.umatter.ufl.edu](http://www.umatter.ufl.edu)
- **Career Resource Center**, First Floor JWRU, 352-392-1601, [www.crc.ufl.edu/next-level](http://www.crc.ufl.edu/next-level)  
If you are having problems (class or non-class related) that are affecting your academic performance, please feel free to visit with the instructor to address the problem. Please do not wait until the end of the semester to discuss any concerns or difficulties