

# ANS 6636 Meat Technology (3 Cr) – Fall 2021

## Course Instructors

**Tracy Scheffler, Ph.D. (Lead instructor)**  
Office: Animal Sciences (#459), Room 210F  
Phone: (352) 392-7529  
Email: [tscheffler@ufl.edu](mailto:tscheffler@ufl.edu)

Office hours: by appointment

**Jason Scheffler, Ph.D.**  
Office: Animal Sciences (#459), Room 231G  
Phone: (352) 392-6994  
Email: [jmscheff@ufl.edu](mailto:jmscheff@ufl.edu)

Office hours: by appointment

**K.C. Jeong, Ph.D.**  
Office: EPI, Rm 200, 2055 Mowry Rd.  
Phone: (352) 29-5376  
Email: [kcjeong@ufl.edu](mailto:kcjeong@ufl.edu)

Office hours: by appointment

## Time & Location

MWF 9:35 – 10:25 am (3<sup>rd</sup> period)  
ANS 102

## Course Description & Objectives

Chemistry, physics, histology, bacteriology, and engineering involved in the handling, processing, manufacturing, preservation, storage, distribution, and utilization of meat.

Goals:

Gain a better understanding and appreciation for

- ✓ Muscle components, their function, and manipulation during live animal growth
- ✓ Metabolic conversion of muscle to meat and factors affecting meat quality
- ✓ The microbial populations that impact food safety and security

## Prerequisites

The student should have completed undergraduate coursework in biochemistry, biology, chemistry, and microbiology.

## Course website on Canvas

Our course Canvas website (login via <https://elearning.ufl.edu/>) will contain the syllabus, resources, and lesson material, provided as *PowerPoint* and *pdf* files.

## Assessments

Students will be evaluated based on their performance on exams, literature review, and presentation.

**Table 1. Assessment types and points**

Assessment type	Number per semester	Points for each	Total points per assessment type	% of overall grade
<b>Exam</b>	4	100	400	80
<b>Literature review</b>	1	50	50	10
<b>Presentation</b>	1	50	50	10
<b>Total</b>			500	100%

Exams are not cumulative. There is no final exam.

Guidelines for literature review and presentation:

- Student can select any topic related to meat technology but it is recommended to discuss with your major advisor
- Student needs to inform the lead instructor (T. Scheffler) of their topic by Sept. 3<sup>rd</sup>.
- The literature review should follow the format for a review paper in a scientific journal
- Due date for the literature review: Monday, Nov. 29<sup>th</sup>
- Student will present their literature review to class (15-20 minute presentation, followed by questions)
- Grades will be determined by instructors based on quality and content.

## Assessment schedule

### Important dates for assessments and assignments

Assessment	Date
<b>Exam 1</b>	M 9/13
<b>Exam 2</b>	W 10/6
<b>Exam 3</b>	M 11/1
<b>Exam 4 (take home)</b>	Due M 11/22
<b>Literature review due</b>	M 11/29
<b>Student presentations</b>	12/1 – 12/8

## Grades and Grading Policy

Grades are based on performance in the assessments (exams and quizzes). Grade assignment and corresponding percentage and point ranges are shown in **Table 3**.

**Table 3: Grade assignment and point range**

Grade	% score range	Point range
<b>A</b>	93.0 – 100.0	≥ 465
<b>A-</b>	90.0 – 92.99	450 – 464
<b>B+</b>	87.0 – 89.99	435 – 449
<b>B</b>	83.0 – 86.99	415 – 434

<b>B-</b>	80.0 – 82.99	400 – 414
<b>C+</b>	77.0 – 79.99	385 – 399
<b>C</b>	73.0 – 76.99	365 – 384
<b>C-</b>	70.0 – 72.99	350 – 364
<b>D+</b>	67.0 – 69.99	335 – 349
<b>D</b>	63.0 – 66.99	315 – 334
<b>D-</b>	60.0 – 62.99	300 – 314
<b>E</b>	≤ 59.99	< 300

### Attendance

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at: <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/> Attendance is not required nor will it be recorded. However, it is highly recommended that you attend class.

### Missing an assessment

An exam may not be missed without an excused absence or prior consent of the instructor. All requests to miss an assessment must be submitted in writing and signed by the student regardless of the reason. Any assessment missed for reasons other than those listed below or as outlined in the [UF attendance policy](#) will not be excused and a grade of zero will be recorded. **No make-up exams will be granted without a valid excuse.**

**Course topics**

## Lecture Schedule\*

<b>Date</b>	<b>Topic</b>	<b>Instructor</b>
<b>Preharvest Food safety and one health approach</b>		
M 8/23	Course introduction / overview of food safety	All / Jeong
W 8/25	Overview of meat safety/pre-harvest food safety	Jeong
F 8/27	Bacterial pathogens/virulence factors	Jeong
M 8/30	Bacterial pathogens/virulence factors	Jeong
W 9/1	Current topics in meat safety - antibiotics	Jeong
F 9/3	Current topics in meat safety - antibiotics	Jeong
M 9/6	No class (Labor Day)	--
W 9/8	Source tracking	Jeong
F 9/10	One health concept for animal and public health	Jeong
M 9/13	<b>Exam 1</b>	
<b>Muscle overview, structure</b>		
W 9/15	Muscle design and structure	J Scheffler
F 9/17	Muscle design and structure	J Scheffler
M 9/20	Microanatomy	J Scheffler
W 9/22	Microanatomy	J Scheffler
F 9/24	Contraction	J Scheffler
M 9/27	Contraction	J Scheffler
W 9/29	Muscle development	Guest
F 10/1	Muscle development	J Scheffler
M 10/4	Muscle growth and protein turnover	T Scheffler
<b>W 10/6</b>	<b>Exam 2</b>	
F 10/8	No class (Homecoming)	--
<b>Muscle fiber type and meat quality development</b>		
M 10/11	Growth promotants	T Scheffler
W 10/13	Muscle fiber type and metabolism	T Scheffler
F 10/15	Muscle fiber type and metabolism	T Scheffler
M 10/18	Conversion of muscle to meat	T Scheffler
W 10/20	Conversion of muscle to meat	T Scheffler
F 10/22	Other postmortem changes	T Scheffler
M 10/25	Fresh meat quality properties	T Scheffler
W 10/27	Genetic aberrations and meat quality	T Scheffler
F 10/29	Flex	T Scheffler
M 11/1	<b>Exam 3</b>	
<b>Meat palatability, processing, and microbiology</b>		
W 11/3	Meat palatability and flavor	T Scheffler
F 11/5	Meat processing ingredients	T Scheffler

M 11/8	Food microbiology: intrinsic factors	J Scheffler
W 11/10	Food microbiology: extrinsic factors	J Scheffler
F 11/12	Food microbiology: extrinsic factors	J Scheffler
M 11/15	Packaging	J Scheffler
W 11/17	Determining shelf life	J Scheffler
F 11/19	HACCP (Exam 4 assigned)	J Scheffler
M 11/22	No class; Exam 4 due by midnight	
W 11/24	No class (Thanksgiving)	--
F 11/26	No class (Thanksgiving)	--
M 11/29	Current topics in meat safety; Literature Review due	Scheffler
W 12/1	Student presentations	All
F 12/3	Student presentations	All
M 12/6	Student presentations	All
W 12/8	Student presentations	All

\*Topics are tentative. The schedule may change depending on instructor and guest lecturer availability.

### Other important dates (besides quizzes and exams)

First class: Mon. Aug. 23<sup>rd</sup>    Last class: Wed., Dec. 8<sup>th</sup> (4<sup>th</sup> exam on this day)

No class: Mon. Sept. 6<sup>th</sup> (Labor Day); Fri., Oct. 8<sup>th</sup> (Homecoming); Wed., Nov. 24<sup>th</sup> and Fri., Nov. 26<sup>th</sup> (Thanksgiving)

### Other important information

#### Technology requirements

Computer requirements for this course are consistent with UF policy for student computing requirements, and likely similar to your other classes:

<https://it.ufl.edu/policies/studentcomputing-requirements/>

This course uses Canvas for providing course content. Please see links below for further information regarding privacy and accessibility of Canvas:

- Canvas (Infrastructure) privacy policy: <https://www.instructure.com/policies/privacy>
- Canvas (Infrastructure) accessibility statement: <https://www.instructure.com/canvas/accessibility>

#### Canvas Technology Requirements

**Computers, Internet, and Web browsers:** Canvas runs on Windows, Mac, Linux, iOS, Android, or any other device with a modern web browser. It is recommended to use a computer less than five years old with at least 1GB of RAM. It is recommended to have a minimum Internet speed of 512kbps. It is **strongly recommended** to not use a wireless connection, phone, tablet, or notepad for critical course tasks such as exams and discussions.

Canvas currently supports the following browsers: Chrome, Safari, Firefox, Edge. Canvas supports the last two versions of most browsers. It is **highly recommend** updating to the **newest version** of whatever browser you are using. Note that your computer's operating system may affect browser function. Failure to use one of these browsers will cause problems.

For more information on approved computers and browsers please visit:

<https://community.canvaslms.com/t5/Canvas-Basics-Guide/What-are-the-browser-and-computer-requirements-for-Canvas/ta-p/66> On this web page there is an area titled “Is My Browser up to Date?” Use it to check each computer and browser you may use in this course. There is another important area on “Browser Privacy Settings.” Read the section(s) for any browser intended for use. For example, **Note that:** In browsers such as Safari, insecure content will never be displayed in the browser. Return to the page to check for updates on technology issues in Canvas.

If you encounter technical difficulties in this course, **contact the UF Computing Help Desk** right away to troubleshoot. <https://helpdesk.ufl.edu/> or (352) 392-HELP. If the problem cannot be fixed immediately, **notify your instructor, and provide them with the Help Desk ticket number.**

### **Services for 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. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation. Students should share their accommodation letter with the instructors and discuss their access needs as early as possible in the semester.

0001 Reid Hall, 352-392-8565, <https://disability.ufl.edu/students/get-started/>

### **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. 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 [ufl.bluera.com/ufl/](http://ufl.bluera.com/ufl/). Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>

### **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.

### **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. [Visit the Student Honor Code and Student Conduct Code webpage for more information.](#)

## Campus Resources

### Health and Wellness

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.

- *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. Includes counseling services, groups and workshops, outreach and consultation, self-help library, and wellness coaching.
- *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.
- *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](#).

### 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.
- Student Success Initiative, <https://studentsuccess.ufl.edu/>
- Student Complaints On-Campus: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>