

ANS 2002
THE MEAT WE EAT- 10555

Class Time: Monday, Wednesday, and Friday (3:00-3:50 pm- Period 8)

Class Location: Room 156 Animal Sciences

Three Credit Hours

Exam IV during Final's Week on Wednesday May 1, @12:30

Instructor

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Course description: ANS 2002- This three hour course fulfills the core curriculum requirement for biological sciences (B). Courses in the biological sciences introduce students to the basic concepts of science and the scientific method and enhance awareness of scientific developments and their impact on society and the environment. This class provides students with an understanding of scientific terms, concepts and theories involving animals and the products they produce. This will allow students to formulate empirically testable hypotheses relative to the safety, quality, humaneness and sustainability of muscle food production.

The Meat We Eat is a non-ANS major lecture course designed to create a more informed consumer of animal muscle products and address current issues in animal agriculture. The lectures will cover all aspects of animal protein production, processing and retailing, as well as the role of animal muscle protein in the diet. Students will understand proper selection, preparation, cooking and storage of animal protein products and their influence on food safety and palatability. Students will develop an appreciation for meat and muscle chemistry and composition, muscle growth and contraction.

General Education Student Learning Outcomes:

Know the basic concepts, theories and terminology of animal, meat, and food science and apply the scientific method to meat animal production.

Know the major scientific developments within animal, meat, and food science and the impacts on society and the environment.

Know relevant processes of physiology and biochemistry within animal, meat, and food science which impact food safety and quality.

Know the role of muscle foods in a balanced diet.

Know the role of meat animal production and muscle foods in feeding a growing world population.

Students will develop the ability to formulate empirically testable hypotheses relative to the safety, quality, humaneness and sustainability of muscle food production.

Students will be asked to take facts presented in class and synthesize a written answer for real world questions.

Additional Student Learning Outcomes:

Know the chain of production, including grading, processing and merchandising for all animal muscle proteins.

Course grading: There will be **no** makeup questions of the day or examinations. For students with an authorized excuse, the grade for a missed major examination will be determined by averaging the scores for the major examinations that were taken.

Out of class assignments: You must do at least 5 out of class assignments- each accounts for 4% of your grade. All due on Canvas by 11-12.

Options include: 1) Processed Meat Claims & Label Ingredients Assignment. Take a picture of the front and back of a processed meat item at retail. Processed Meat- MUST CONTAIN ADDED INGREDIENTS (ground beef & fresh, non-marinated chicken breast doesn't work)

Write the name and town the retail market was located in. Paste the picture to a word document and describe what any of the label claims (Low Fat, reduced sodium, ect) mean relative to FSIS and describe what properties the ingredients have (ie. Soy protein is a binder to cheapen costs).

2, 3, & 4) The three sets of questions associated with the beef, pork, and lamb fabrication videos. The videos and questions are under the Modules header of Canvas

5) Watch this video

<https://www.bing.com/videos/search?q=big+fat+suprize+video&view=detail&mid=426902BBE07B56FB48DF426902BBE07B56FB48DF&FORM=VIRE>

Then draft a 1 page paper about the truthfulness of the following statement "High levels of dietary cholesterol is the leading cause of heart disease and obesity"

6 & 7) Describe what happened (logistics, pathogenesis, root cause, health impacts, recall, interventions) with **two** of these famous foodborne illness outbreaks. <https://www.healthline.com/health/worst-foodborne-illness-outbreaks>

8) Go to the PDF titled "Chipotle Welfare" under the files tab in Canvas. Draft a 1-2 page paper documenting where you think this company lies on the rights/welfare spectrum and describe differences in animal well-being between the two systems shown in the pictures.

Meat Cookery Video:

The Meat Cookery Video Project is due 11-12 @ Midnight Eastern Standard Time. You will use the knowledge you have gained from watching our Example Meat Cookery Video Project to develop your own video. The final product for this project will be uploaded to YouTube- then email me a link to your video.

The video is worth 10% of the grade- the scoring lexicon which will be used is at the end of the syllabus.

Sample Final Project:

<http://mediasite.video.ufl.edu/Mediasite/Play/553fd37e0b254f9d9dcbaac74d3eea641d>

In your video you should document acquiring/purchasing, storing, unpackaging, and cooking the dish and handling the leftovers. Nothing ILLEGAL or IMMORAL will be tolerated. There isn't a restriction on what products can be prepared, except that it must not contain only seafood or only cured/processed meat (hot dog, ham, salami, etc.). **The video should not exceed 12 minutes.**

The video needs to:

- 1) Explain thoroughly what recipe you are preparing, why you chose that recipe, and what meat and non-meat ingredients are you using and any contextual &/or cultural information that will assist in better understanding the recipe you are preparing.
- 2) Document the location where you acquired the meat including retailer name, and how much it cost and weighed. Describe how the product was presented at retail and how it was packaged. Collectively, what is your per serving cost of the entire dish, distinguishing between the meat and non-meat components.
- 3) Document how the product was packaged, what the packaging material looked like. Did the product look like it was packaged at that retail location or prepackaged and delivered case-ready to the retail store?
- 4) Document what is the fresh meat product, what muscle is it, what wholesale cut is it a part of, was it ground or intact, needle-tenderized, enhanced, etc. or could you tell? What impact do those parameters have on the cookery of the product? If it was not effectively labeled, how were you able to identify what the product was?
- 5) What cookery method will you choose and why did you chose that cooking method?

- 6) How did you store the product prior to preparing it, for what length, and what was the approximate refrigeration temperature?
- 7) Document proper handwashing and proper sanitary handling of raw and cooked meat.
- 8) Document minimization of cross-contamination from storage, to food preparation, to cooking, to ready-to-eat areas.
- 9) Document proper use of a thermometer during cooking.
- 10) Document proper handling of leftovers after consumption

Meat the Controversy Debate:

Students will be assigned to a Meat the Controversy debate team and allowed to choose from a variety of topics to debate a contemporary issue in animal agriculture. Each group will be required to collectively/combined (1 yes & 1 no) submit a short outline by **10-15** representing up to a **3 min** opening statement for each side. You will receive feedback about your outline prior to submitting your slides on your debate on **11-12**.

Important dates include: 9-10 Group MTC debate topics determined, 10-15 Submit one outline worth 2.5% of class (you will still have the opportunity to revise prior to class debate), 11-12 Slides due

The slides/outline of each group's debate principles will be shared with students online to assist in preparing for Test 4. After the opening statements and at the conclusion of questioning, a representative from each side will have the option to give a 60 second closing statement. For opening and closing statements, preference will be given to groups who incorporate all members and do not read their slides.

Students will give themselves and fellow group members participation scores for the entire project from 0 - 5. **I must receive these scores via email after class on the day of your group's debate.**

GROUP EVALUATION FORM

DATE: _____ YOUR NAME: _____ TOPIC _____

GROUP MEMBER	PARTICIPATION SCORE*
Yourself	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Participation score

- 5 = Very cooperative, always contributed, did their fair share and more.
- 4 = Moderately cooperative, contributed somewhat, did an adequate portion.
- 3 = Somewhat cooperative, contributed some, showed up.
- 2 = Slightly cooperative, slight contribution, did some work.
- 0 = Not cooperative, did not contribute, did practically nothing.

*This information will be compiled with others and used in strictest confidence.

The moderator will score each individual student from 0 - 5 using the following rubric.

- 5 = Accurate, logical, and articulately communicated/ delivered
- 4 = Moderately accurate, logical, and well communicated/ delivered
- 3 = Somewhat accurate, illogical, and poorly communicated/ delivered
- 2 = Completely inaccurate, illogical, and poorly communicated/ delivered
- 0 = Absent

Any out of class assignment, debate draft, and links to cooking videos should be submitted via Canvas by the appropriate date and time.

More information on the university wide grading policy can be accessed at:
<http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>

Grades Based On The Following:		Letter Grades Will Be Determined as Follows:			
Question of the Day	40	A	90 & Above	C	70 - 74.99
Four Exams (100 each)	400	B+	85 - 89.99	D+	65 - 69.99
Out of class assignments (40 each)	160	B	80 - 84.99	D	60 - 64.99
Meat the Controversy Debate	120	C+	75 - 79.99	E	59.99 & Below
Meat cookery video	80				
Total	800				

Authorized absences: The only absences that will be authorized are:

ABSENCE FOR A 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.

ABSENCE FOR A DEATH OR SERIOUS ILLNESS IN THE IMMEDIATE 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.

ABSENCES RESULTING FROM 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.

ABSENCE FOR A 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.

ABSENCE FOR A 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.

ABSENCE FOR A 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.

Class Schedule

DATE	TOPIC
1-7	Introduction
1-9	History (Meat Lab Tour)
1-11	EXTENSION EVENT- NO CLASS
1-14	History
1-16	Production Methods- Beef
1-18	Production Methods- Sheep and goats
1-21	MLK DAY- NO CLASS
1-23	Production Methods- Pork & Poultry
1-25	Animal Welfare *Choose Debate Topics*
1-28	Scientific Method
1-30	(Meat Treat of the Week Topic- Feedstuff, Marbling, & Physiological Age)
2-1	Exam I
2-4	Federal Inspection
2-6	Inspection/Food Microbiology
2-8	Food Microbiology
2-11	Food Microbiology
2-13	(Meat Treat of the Week Topic- pH, Degree of Doneness, Aging, Location, & Cooking)
2-15	By-Products & Rendering
2-18	Composition of Meat/Muscle Structure
2-20	Muscle Contraction
2-22	Muscle Contraction
2-25	Conversion of Muscle to Meat
2-27	Conversion of Muscle to Meat
3-1	Exam II *MTC Outline Due*
3-11	Carcass Grading
3-13	Fabrication, wholesale & retail cuts
3-15	Meat Processing Ingredients
3-18	Meat Processing
3-20	(Meat Treat of the Week Topic- Enhanced & Non-Intact Whole Muscle Cuts)
3-22	Fabrication, wholesale & retail cuts (Demonstration- Top butt & wrapping)
3-25	Meat Processing
3-27	(Meat Treat of the Week Topic- Ground Beef & Fresh Sausage)
3-29	Meat Packaging
4-1	Meat Packaging
4-3	*VIDEO, MTC PPT, & ALL OUT OF CLASS Due* Meat in the Diet
4-5	Nutritive Value of Meat in the Diet
4-8	Nutritive Value of Meat in the Diet
4-10	Exam III
4-12	2 MTC Debates
4-15	2 MTC Debates
4-17	2 MTC Debates
4-19	2 MTC Debates
4-22	2 MTC Debates
4-24	Grade Review & Processed Meat O'Rama
5-1	Exam IV during Final's Week on Wednesday May 1, @12:30

Meat Safety

Livestock species can carry microorganisms that can cause diarrhea and flu-like symptoms in humans. These microorganisms can be shed in an animal's feces and saliva. These organisms of concern such as Salmonella, Campylobacter, and E.coli can survive on the animal's hide or surroundings, and though unlikely could be present in/on meat. These pathogens can cause significant illness, especially to someone who is immunocompromised. Students should wash their hands after handling livestock and/or raw meat.

Digital devices (cell phones, iPads, laptops)

Students are asked to silence their cellular phones before entering the classroom. Unless students are taking notes on their laptops, laptops should be OFF during class. If students are found to be Facebooking or texting, they will be asked to turn off their digital device.

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://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 <https://evaluations.ufl.edu/results/>

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. 0001 Reid Hall, 392-8565, www.dso.ufl.edu/drc/

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

On all work submitted for credit by students at the university, the following pledge is either required or implied: “**On my honor, I have neither given nor received unauthorized aid in doing this assignment.**” The Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Campus Helping Resources

Health and Wellness- U Matter, We Care:

If you or a friend is in distress, please contact umatter@ufl.edu or 352 392-1575 so that a team member can reach out to the student.

Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc/Default.aspx> , 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Assault Recovery Services (SARS) Student Health Care Center, 392-1161.

University Police Department, 392-1111 (or 9-1-1 for emergencies). <http://www.police.ufl.edu/>

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or Learning-support@ufl.edu.

<https://lss.at.ufl.edu/help.shtml>.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. <http://www.crc.ufl.edu/>

Library Support, <http://cms.uflib.ufl.edu/ask>.

Student Complaints: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf

Meat The Controversy Debate Topics

1. Should non-therapeutic antibiotics be used with meat animals relative to their health, the environment and human health? YES or NO
2. Should hormone implants be used with ruminants relative to their health, the environment and human health? YES or NO
3. Should nitrate/nitrite be used in meat products relative to human health? YES or NO
4. Is meat from grass-fed ruminant animals more healthy &/or safer for you than meat from animals fed grain? YES or NO
5. Is locally-raised food more sustainable than food which has traveled from more than 400 miles? YES or NO
6. Does meat in the diet cause cancer? YES or NO
7. Is modern special-fed veal production humane? YES or NO
8. Should we slaughter horses in the US? YES or NO
9. Should in-vitro produced animal protein be considered "meat"? YES or NO
10. Are food products from transgenic animals safe to go into the food supply? YES or NO
11. Is raising ruminant animals for food biologically sustainable? YES or NO
12. Should processing aids be required to be listed on meat labels? YES or NO
13. Should beta agonists be fed to meat animals relative to their health and human health? YES or NO
14. Do humans have a biological requirement for meat in the diet? YES or NO
15. Should lean, finely-textured beef be in our school lunches? YES or NO
16. Should US meat production be subsidized? YES or NO
17. Should we increase the amount of government oversight of animal welfare on the farm? YES or NO
18. Should the US meat animal industries become less specialized & more diversified? YES or NO
19. Are we more likely to develop food-borne illness from animal foods than plant foods? YES or NO
20. Should we encourage immunocastration of intact males concerning animal welfare and food quality? Yes or NO

Video Scoring Lexicon

Each video should receive a final score between 0-10.

Criteria	Unsatisfactory	Limited	Proficient	Exemplary	Rating
Content and Creativity	Message is unclear and very boring. Includes little essential information and one or two facts.	Message is vaguely communicated and is rather boring. Includes only a few facts.	Message is clearly communicated, relatively interesting and includes essential information.	Strong well presented, interesting message. Content is covered completely and in depth.	
	Little or no enhancements add interest to the project, or excessive use of random enhancements detracts from the project. (0 or 1 pts)	Digital enhancements accompany project, but there is little sign of reinforcement. Tendency toward randomness with approach. (2 pts)	Digital enhancements combine with high quality video to effectively communicate message. (3 pts)	Digital enhancements are purposeful and aid in understanding every facet of selecting a dish, acquiring/purchasing the product, storing, unpackaging, and cooking dish and handling the leftovers. (4 pts)	
Accuracy and Clarity Weight for this criterion	Incomplete and inaccurate from purchasing through preparation. No or very poor display of safe food handling &/or minimizing cross contamination.	Mostly inaccurate, possibly biased information, with 4 or more statements being inaccurate and /or at least one significant food safety risk.	Mostly accurate, clearly presented information, with 2 or 3 having some level of inaccuracy and/or one minor food safety inaccuracy.	Complete and accurate understanding from purchasing through preparation. Excellent display of safe food handling &/or minimizing cross contamination.	
	Video is not clear or focused making it difficult to see features being discussed &/or audio is not in English. (0 or 1 pts)	Most of the video is easily viewed/identified. However, the majority of the video is not distinguishable or matches poorly with the audio explanations. (2 or 3 pts)	Video is in focus and content is easily viewed/identified. One small portion of the video is not distinguishable or matches poorly with the audio explanations. (4 or 5 pts)	Video is in focus and easy to view. The videos were carefully conducted to effectively present the information. (6 pts)	
TOTAL					