

Milk Quality and Mastitis Control

ANS 4905, ANS 6905- 1 credit

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CATALOG DESCRIPTION: CREDIT: 1; instructor consent.

This course focuses on best management practices for milk quality and mastitis control, including proper techniques, evaluating procedures, detecting and treating mastitis, and troubleshooting milk quality issues on dairy farms.

COURSE FORMAT:

This is a one-credit course that will include two 40 minutes of previously recorded lectures each week that students will watch on their own time along with 4 in person meeting times determined between the instructor and students at the beginning of the semester for hands-on training and problem-solving discussions.

COURSE LEARNING OBJECTIVES:

Upon completion of the course, students will be able to:

- Explain proper milking procedures and mastitis control plan
- Identify milk quality and mastitis risk factors
- Critically evaluate milking procedures and milking systems
- Develop and evaluate solutions to milk quality and mastitis problems on dairy farms

OFFICE HOURS: By appointment.

REQUIRED TEXTBOOKS: None.

Recommended Reading:

Current Concepts of Bovine Mastitis, 5th Edition, National Mastitis Council

Lecture and Exams Schedule:

Lecture	Topic
Week 1 August 25-29	Dairy cow facilities
	Dairy cow handling and stockmanship
Week 2 September 1 Labor Day September 2-5	Milking equipment
	In person lecture- Meeting room suite 204- Dairy Sciences Building: Basics of Mammary Physiology- TBA
Week 3 September 8-12	Milking procedures
	Mastitis definition and causes
	Hands-on activity- Dairy Unit Milking equipment + Milking procedures- TBA
Week 4 September 15-19	Hands-on activity- Collecting milk samples aseptically- TBA
September 19	EXAM 1- Canvas- TBA
Week 5 September 22-26	Mammary immunity
	Mastitis detection
Week 6 September 29-October 3	Mastitis treatment and control
	Dry cow treatment
	Hands-on activity- Dairy Unit- CMT testing + Dry off therapy- TBA
Week 7 October 6- 10	Milk quality
	Evaluating milking procedures
	Hands-on activity- Dairy Unit- Evaluating milking procedures- TBA

Week 8 October 13-17	Evaluating mastitis risk
	Evaluating milking equipment
October 22	EXAM 2- Canvas- TBA
November 5	Graduate Student Project Due

EXPERIENTIAL LEARNING:

A key value of this course is experiential learning. Several lectures will be accompanied by an activity, such as touring and describing UF dairy facilities, examining udder health and mastitis risk factors at the UF dairy, and evaluating milking procedures and equipment. Students will need to complete 4 experiential learning activities/problem solving projects over the course of the semester. The students and instructors will determine a schedule of activities at the start of the semester.

ASSIGNMENTS AND GRADING:

Undergraduate students will be graded on completion of:

- **Lectures + questions** (5 pts each, total 70 pts)
- **Experiential learning activities** (10 pts each, total 40)
- **Exams** (20 pts each, total 40 pts)

Graduate students will be graded on completion of:

- **Lectures+ questions** (5 pts each, total 70 pts)
- **Experiential learning activities** (10 pts each, total 40)
- **Exams** (10 pts each, total 20 pts)
- **Essay** (20 pts)

Students will receive a letter grade based on the following scale:

Percentage	Grade
93 - 100	A
90 – 92.99	A-
87 – 89.99	B+
83 – 86.99	B
80 – 82.99	B-
77 – 79.99	C+
73 – 76.99	C
70 – 72.99	C-
67 – 69.99	D+
63 – 66.99	D
60 – 62.99	D-
< 60	E

The percentage is calculated from points earned from assignments out of a total of 100 possible points.

ATTENDANCE AND MAKE-UP WORK

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/UGRD/academic-regulations/attendance-policies/>

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

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

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

- Counseling Services
- Groups and Workshops
- Outreach and Consultation
- Self-Help Library
- Wellness Coaching

U Matter We Care, www.umatter.ufl.edu/.

Career Connections Center, First Floor JWRU, 392-1601, <https://career.ufl.edu/>.

Student Success Initiative, <http://studentsuccess.ufl.edu>.

Student Complaints:

<https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>

ANIMAL CONTACT AND RISK

Direct animal contact is not required as part of this course, but the student's choice of project may require animal contact or work around farm equipment. **Students are required to complete Dairy Cattle Safety and Beef Cattle Safety courses (ANS 800 and ANS801 in MyUFL training) in the first week of class.** The farm environment presents health and physical risks from contact with farm animals and farm equipment. Any concerns or questions should be brought to the attention of the Instructor. Despite efforts to make students aware of potential risks, not all situations or events can be foreseen or prevented. The University of Florida is not liable for illness or injuries to students participating in coursework and, per University policy, students are required to purchase the Student Health Insurance Plan or comparable coverage. See: <https://healthcompliance.shcc.ufl.edu/health-insurance-requirement/>