ANS 4932 Fall 2016
Beef Cattle Reproductive Management

Instructor: Dr. Joel V. Yelich
Animal Sciences Building, Room 125h

Office Hours: Open or by appointment
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Lecture: **Tuesday, Thursday** 10:40 - 12:00 PM (Period 4/5): Room 151 Animal Sciences Building

Lab: Tuesday 2:00 - 5:00 PM (Periods 7-9) Room 151 Animal Sciences Building. Laboratories will also be held at Animal Science Building, Dairy Unit, and Beef Units. Refer to laboratory schedule for weekly lab locations.

Course Description: Provide an in depth overview of applied bovine reproductive management and the factors that affect the efficiency of reproduction including managerial, biological, and economical.

Objectives:

1) Introduce the different components of ruminant reproductive management programs and discuss the underlying physiological mechanisms regulating these components with emphasis on beef cattle.
2) Introduce emerging reproductive technologies and discuss how these technologies can be incorporated into reproductive management programs in dairy and beef cattle.
3) Provide hands on experience performing reproductive management techniques with emphasis given to pregnancy diagnosis by rectal palpation and artificial insemination in dairy and beef cattle.
4) Integration of all the principles covered in class in solving reproductive management problems with an emphasis placed on economic and production efficiency in a beef and dairy operation.

Textbook: There is no required textbook for the course. Reading assignments will come from research and popular press articles, extension fact sheets, and book chapters.

Grading & Exams:

Two-hour exams (100 pts each)	200 pts
Final Written Exam (Cumulative)	200 pts
Reproduction Plan (Plan 50 pts & Presentation 50 pts)	100 pts
Lab participation (50 pts) & other assignments (200 pts)	250 pts
Total	***750 pts***

Letter grades will be awarded on a percentage scale:

A	**≥ 94**	**B+**	**≥ 87 to < 90**	**C+**	**≥ 77 to < 80**	**D+**	**≥ 67 to < 70**	**E < 60**
A-	**≥ 90 to < 94**	**B**	**≥ 83 to < 87**	**C**	**≥ 73 to < 77**	**D**	**≥ 63 to < 67**	
		B-	**≥ 80 to < 83**	**C-**	**≥ 70 to < 73**	**D-**	**≥ 60 to < 63**	

Information regarding University Policy on grade point equivalencies and calculation of grade points is located at the following Web address: (http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html).

Please note: This course is taught concomitant with ANS 5312C, the graduate version of the course. The graduate students will have different grading requirements than the undergraduate graduate students. The graduate students will be required to perform all of the graded task as listed above and they will also be required to take a final oral exam and write a research paper.

Exams:

Exam 1	**October, 6 (Thursday in class)**
Exam 2	**November, 10 (Thursday in class)**
Final Exam:	**December, 14 (Wednesday 7:30-9:30 AM)**

All requests to be excused from an exam must be submitted in writing or email by the student regardless of the reason. Any exam or assignment missed for reasons other than those listed below will not be excused and a grade of zero will be recorded.

1) Absence for a university-approved field trip or activity (clear one week in advance).
2) Absence for death/serious illness in immediate family (verification by obituary).
3) Absence resulting from personal illness (verification consisting of a letter of explanation from hospital or doctor on official letterhead). Please review excuse note policy of the Student Health Care Center.

Other Important Items

Important Dates:	Sept. 5 (Monday)	Labor day (No classes).
	Sept. 16 (Friday)	Deadline to withdraw and receive a 25% fee refund (W assigned).
	Oct. 14 (Friday)	Homecoming (No classes).
	Nov. 11 (Wednesday)	Veterans Day (No classes).
	Nov. 21 (Monday)	Deadline to withdraw without receiving failing grades. Deadline to drop a course by petition without receiving a WF.
	Nov. 23-26 (Wednesday - Friday)	Thanksgiving (no classes).
	Dec. 7 (Wednesday)	Last Day of Classes.
	Dec. 10, 12-16	Final Exams.

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/honorcodes/honorcode.php.

Disability Issues: 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.

Campus Assistance 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/cwc/

Counseling Services	Groups and Workshops
Outreach and Consultation	Self-Help Library
Training Programs	Community Provider Database

- ***Career Resource Center****,* First Floor JWRU, 352-392-1601
  www.crc.ufl.edu/

If you are having problems comprehending lecture and (or) lab material or other academic, university, or personal issues that are affecting your academic performance, please feel free to visit with the instructors to address the problem(s). **Please do not wait until the end of the semester to address any difficulties you may be having.**

Reading List

Factors affecting calf Birth weight: A review. M.D. Holland and K.G. Odde. Theriogenology 38:769-798,1992

Genetic effects on beef heifer puberty and subsequent reproduction L. C. Martin, J. S. Brinks, R. M. Bourdon and L. V. Cundiff.. J Anim Sci 1992. 70:4006-4017.

Management considerations in heifer development and puberty. D. J. Patterson, R. C. Perry, G. H. Kiracofe, R. A. Bellows, R. B. Staigmiller and L. R. Corah. J Anim Sci 1992. 70:4018-4035.

Effect of Body Condition on Rebreeding. William E. Kunkle and Robert S. Sand. EDIS AS 51. University of Florida IFAS Extension.

Effects of Body Condition on Productivity in Beef Cattle. William E. Kunkle, Robert S. Sand, and D. Owen Rae. EDIS SP-144. University of Florida IFAS Extension.

Sexing mammalian sperm for production of offspring: the state-of-the-art. L.A. Johnson. Animal Reproduction Science 60–61 _2000. 93–107.

Economics of selecting for sex: the most important genetic trait. G. E. Seidel, Theriogenology 59 (2003) 585-598.

Estimation of genetic parameters for scrotal circumference, age at puberty in heifers and hip height in Brahman cattle. C. A. Vargas, M. A. Elzo, C. C. Chase, Jr, P. J. Chenoweth and T. A. Olson. J Anim Sci 1998. 76:2536-2541.

Genetic relationships between scrotal circumference and female reproductive traits. G. Martínez-Velázquez, K. E. Gregory, G. L. Bennett and L. D. Van Vleck. J Anim Sci 2003. 81:395-401.

The value of reproductive tract scoring as a predictor of fertility and production outcomes in beef heifers. D. E. Holm, P. N. Thompson and P. C. Irons. J Anim Sci 2009, 87:1934-1940.

Breeding heifers at one year of age. Biological and economic considerations. Short, R. E., R. B. Staigmiller, R. A. Bellows, and R. C. Greer. 1990.. In:Proc. 39th Annual Beef Cattle Short Course. pp. 93-106. Univ. of Florida, Gainesville

Carcass composition in mature hereford cows: estimation and effect on daily metabolizable energy requirement during winter . Wagner, J. J., K.S. Lusby, J. W. Oltjen, J. Rakestraw, R. P. Wettemann, and L. E. Walters. 1988.. J Anim Sci. 66:603-612.

ANS 4932 Lecture and Lab Schedule

Week #	Lecture Topic	Lab Location and Topic
1	Introduction	***ANS Bldg: Female Anatomy Review & Pregnancy Determination***
1	Reproductive Losses	
1	Review of the Estrous Cycle	***Palpation***
2	Puberty	
2	Puberty	***Palpation***
3	Heifer Development	
3	Heifer Development	***Palpation***
4	Estrous Synchronization	
4	Estrous Synchronization	***Palpation***
5	Estrous Synchronization	
5	Estrous Detection	***Palpation***
5	Artificial Insemination/Sexed Semen	
6	Embryonic Development	***Palpation***
7	Pregnancy and Parturition	
7	Pregnancy and Parturition	***Palpation***
8	Peripartum Management	
8	Peripartum Management	***Beef Teaching Unit - AI***
9	Postpartum Reproduction	
9	Postpartum Reproduction	***Beef Teaching Unit – AI***
10	Male Reproduction	
10	Male Reproduction	***Beef Teaching Unit – AI***
11	Cryopreservation of Semen	
11	Breeding Soundness Exam	***Beef Teaching Unit – AI***
12	Breeding Soundness Exam	
13	Breeding Season Management	***Beef Teaching Unit – AI***
13	Breeding Season Management	
14	Embryo Transfer	***Southeastern Semen Services Field Trip***
14	Reproductive Management/Economics	
15	Reproductive Management/Economics	***Santa Fe Beef Unit- Breeding Soundness Exams***
16	Repro Plan Presentations	
16	Repro Plan Presentations	***BTU and ANS Bldg – Embryo Transfer***
Dec	***Final Exam***	

The instructor reserves the right to modify any part of the lecture and (or) lab syllabus at his discretion. There may also be times during the semester when it is necessary to modify the lecture/lab schedule and (or) material being presented. At such time, the instructor will make the necessary announcements in lecture/lab and (or) by email.