**Genetic Improvement of Livestock**

**ANS 278**

**Course Syllabus**

**Course Number:** ANS 278

**Credits:** 3 credits: Class meets Tuesday and Thursdays from 10am - 11:50am, and has a 1 hour online component.

**Location:** White Oak Hall 217

**Instructor:** Jenny Strooband

**Instructor Office:** WOH 127C

**Office Hours:** Tuesday 2-3 pm; Wednesday 9-10 am; Friday 10-11 am.

**Phone:** 917-4767 (email is a better option).

**Email:** jenny.strooband@linnbenton.edu

**Text:** *Understanding Animal Breeding*, Richard M. Bourdon

**Instructor Website:**<http://cf.linnbenton.edu/mathsci/ansci/stroobj>

**Moodle:**[https://elearning.linnbenton.edu](https://elearning.linnbenton.edu/)

**Introduction/Course Objectives**

*As a result of taking this course you will be able to:*

* Express molecular inheritance.
* Explain how management can influence traits expression through inbreeding, outbreeding and line breeding.
* Explain the benefits prepotency and drawbacks inbreeding depression associated with inbreeding.
* Explain the difference of inheritance in monogenic, polygenic, simply inherited and qualitative traits.
* Calculate repeatability and heritability, and apply these concepts to a practical situation.

**Grading**

This course will consist of approximately 16 assignments, 4 quizzes (the low score will be dropped), 2 midterms and a final.

Daily assignments: (about) 16 x 5 points = 80 points

Quizzes: 3 x 25 points = 75 points (This could vary)

Online Work: 8 x 5ish points = 40

Midterms: 2 x 100 points = 200 points

Final Exam: 150 points

**Total 545 points possible**

Grades will be loosely defined as the following:

477 points and above = A

424 - 476 points = B

371 – 423 points = C

318 - 370 points = D

Below 317 = F

\*\*\*In order to make up a missed quiz or exam, you must inform me **that you will miss the quiz or exam ahead of time**. You must make up the quiz or exam the next class period. **It is your responsibility to remind me!** All classroom assignments will be due at the end of class on Thursday.\*\*\*

Incomplete Grades: An incomplete (I) may be given if the student completes the majority of the coursework, but for some valid reason misses a portion of the course. Before an “I” is given the student and the instructor must agree on when the work will be completed. If the student does not complete the work they may receive a letter grade for the course.

**Tips for Success in ANS 278**

1. Come to every class session.
2. Do the problems at the end of each chapter. I love putting these on tests, and often, the answers are in the back of the book!
3. Do the chapter readings.
4. Participate in all group work problem solving
5. Don’t get behind! We move fast and won’t wait for you to catch up!
6. Come to my office hours with questions. There is no such thing as a bad or a stupid question. I am here to help you.
7. Don’t fear the math, make the math fear you!

**Accommodation Requests**

LBCC is committed to inclusiveness and equal access to higher education. If you have approved accommodations through the Center for Accessibility Resources (CFAR) and would like to use your accommodations in the class, please talk to your instructor as soon as possible to discuss your needs. If you believe you may need accommodations but are not yet registered with CFAR, please visit the [**CFAR Website**](https://www.linnbenton.edu/cfar) for steps on how to apply for services or call (541) 917-4789.

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**A Very Tentative Schedule for 2020**

**Week Date Topic Reading**

1 1/6 Course Intro., Intro. Animal Breeding Chap. 1

2 1/13 Mendelian Genetics; **Quiz I** Chap. 3

3 1/20 Mendelian Genetic/ Pop. Genetics; **Quiz II** Chap. 2

4 1/27 Population Genetics Chap.4

5 2/3 **MT 1**; Genetic Traits, Trait Selection Chap. 5 & 6

6 2/10 Heritability Chap. 9

7 2/17 Repeatability; **Quiz III** Chap. 15 & 16

8 2/24 Mating Systems & Probability Chap. 17 & 18

9 3/2 **MT 2**; Inbreeding Coefficients Chap. 19

10 3/9 Biotech., Stem Cells, GMO’s Chap. 20

11 3/16 **Cumulative Final** **Tuesday, March 17th at 9:30 AM**