

Genetics of Livestock Improvement
ANS 310
Spring 2017
MWF 8:00 – 8:50 | AGIT 238
Web Enhanced

Instructor: Dr. Douglas Eborn
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Office Hours: T/R 8:00-10:00
 F 9:00-11:00
 By Appointment

Course Description

This course covers the basic concepts and principles for selection and mating to make genetic improvement in farm animals but is applicable to many other types of animals and wildlife. It will cover selection for both qualitative and quantitative traits.

Course Objectives

1. Understand and define all breeding and genetics terms presented in lecture.
2. Understand Mendelian inheritance, the components of the genetic model, and difference between qualitative and quantitative traits.
3. Calculate population gene and genotypic frequencies.
4. Calculate the probability that an individual is a carrier of a particular gene and understand how that change depending on the group of females the sire is mated to.
5. Calculate estimates of statistical parameters necessary to describe a population and understand the application of each.
6. Understand the cause and effects of hybrid vigor and inbreeding depression.
7. Understand different selection methods including tandem selection, independent culling methods and selection index methods.
8. Understand the uses of breed complementary, assortative mating, inbreeding, and outbreeding
9. Describe the difference between individual, maternal and paternal heterosis
10. Describe different crossbreeding systems presented in class and understand advantages and disadvantages of each.
11. Understand how marker-assisted selection works and how it impacts genetic predictions today.
12. Understand what breeding values are and how they estimated.

Prerequisites

The syllabus/schedule are subject to change.

BSC 1407 or ANS 118 or PLS 1415 or PLS 115

Materials

Recommended Text: Understanding Animal Breeding, 2nd Edition (2000)

Author: Richard M. Bourdon

Publisher: Prentice Hall Publishing

ISBN-10: 0130964492 | ISBN-13: 978-0130964496

COURSE PROCEDURES/POLICIES

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

Course Specific Procedures/Policies

1. Attentiveness in class is suggested but not required. However, if you choose otherwise, do not, talk to your neighbors, read the paper, and especially do not text. **Achieving the course objectives and being successful will require attendance, taking notes, reading the text, and study.**
2. All hats will be removed (or ball caps turned backward) during exams. Also you may be asked to leave your backpacks in the front of the room on exam days.

Grading

1. Exams:
 - Four exams will be given through the course. The last exam may be a comprehensive final.

Tentative Dates:

- 1) Fri. February 10th
- 2) Fri. March 10th
- 3) Fri. April 7th
- 4) Mon. May 8th 8:00 A.M.

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- Exams will be given during the entire class period. Exam formats may include T/F, matching, multiple choice, and short answer. Exams and quizzes will require math so you will need to bring a simple calculator. **A smart phone/cell phone/tablet will not be allowed to use on the exam.**
 - All students are to take the in-class exams at the time they are scheduled unless you have a great excuse. If a makeup is written it may be more difficult, not easier, for the student.
2. Quizzes and Homework
- A quiz or homework assignment may be given every week during the semester.
 - Most quizzes will typically be taken through eCollege and posted no later than Wednesday of that week and due by the following Monday.
 - Unannounced quizzes may also be given in class
 - 1 quiz will be dropped at the end of the semester.
 - Homework assignments will be given in addition to the quizzes.
3. Missing or Late Work
- Missing or late work will receive an 50% deduction unless prior notification and permission is given to and by the instructor

Grading

A: 90% +
 B: 80-89%
 C: 70-79%
 D: 60-69%
 F: Below 60%

TECHNOLOGY REQUIREMENTS

- To fully participate in online courses you will need to use a current Flash enabled internet browser. For PC and Mac users the suggested browser is Mozilla Firefox.
- You will need regular access to a computer with a broadband Internet connection. The minimum computer requirements are:
 - 512 MB of RAM, 1 GB or more preferred
 - Broadband connection required courses are heavily video intensive
 - Video display capable of high-color 16-bit display 1024 x 768 or higher resolution
- You must have a:
 - Sound card, which is usually integrated into your desktop or laptop computer
 - Speakers or headphones.

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- *For courses utilizing video-conferencing tools and/or an online proctoring solution, a webcam and microphone are required.
- Both versions of Java (32 bit and 64 bit) must be installed and up to date on your machine. At a minimum Java 7, update 51, is required to support the learning management system. The most current version of Java can be downloaded at: JAVA web site <http://www.java.com/en/download/manual.jsp>
- Current anti-virus software must be installed and kept up to date.
- Run a browser check through the Pearson LearningStudio Technical Requirements website. Browser Check http://help.ecollege.com/LS_Tech_Req_WebHelp/en-us/#LS_Technical_Requirements.htm#Browset

Running the browser check will ensure your internet browser is supported.

- Pop-ups are allowed.
- JavaScript is enabled.
- Cookies are enabled.
- You will need some additional free software (plug-ins) for enhanced web browsing. Ensure that you download the free versions of the following software:
 - Adobe Reader <https://get.adobe.com/reader/>
 - Adobe Flash Player (version 17 or later) <https://get.adobe.com/flashplayer/>
 - Adobe Shockwave Player <https://get.adobe.com/shockwave/>
 - Apple Quick Time <http://www.apple.com/quicktime/download/>
- At a minimum, you must have Microsoft Office 2013, 2010, 2007 or Open Office. Microsoft Office is the standard office productivity software utilized by faculty, students, and staff. Microsoft Word is the standard word processing software, Microsoft Excel is the standard spreadsheet software, and Microsoft PowerPoint is the standard presentation software. Copying and pasting, along with attaching/uploading documents for assignment submission, will also be required. If you do not have Microsoft Office, you can check with the bookstore to see if they have any student copies.
- For additional information about system requirements, please see: System Requirements for LearningStudio <https://secure.ecollege.com/tamuc/index.learn?action=technical>

ACCESS AND NAVIGATION

Pearson LearningStudio (eCollege) Access and Log in Information

This course will be facilitated using Pearson LearningStudio, the learning management system used by Texas A&M University-Commerce. To get started with the course, go to myLeo and from the top menu ribbon select eCollege. Then on the upper left side of the screen click on the My Courses tab. <http://www.tamuc.edu/myleo.aspx>

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You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu.

Note: It is strongly recommended you perform a “Browser Test” prior to the start of your course. To launch a browser test login to Pearson LearningStudio, click on the My Courses tab, and then select the Browser Test link under Support Services.

Pearson LearningStudio Student Technical Support

Texas A&M University-Commerce provides students technical support for the use of Pearson LearningStudio.

Technical assistance is available 24/7 (24 hours, 7 days a week).

If you experience LearningStudio (eCollege) technical problems, contact the LearningStudio helpdesk at 1-866-656-5511 (toll free) or visit Pearson 24/7 Customer Support Site <http://247support.custhelp.com/>

The student help desk may be reached in the following ways:

- **Chat Support:** Click on *'Live Support'* on the tool bar within your course to chat with a Pearson LearningStudio Representative.
- **Phone:** 1-866-656-5511 (Toll Free) to speak with Pearson LearningStudio Technical Support Representative.

Accessing Help from within Your Course: Click on the *'Tech Support'* icon on the upper left side of the screen inside the course. Then you will be able to get assistance via online chat or by phone.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

Policy for Reporting Problems with Pearson LearningStudio

Should students encounter Pearson LearningStudio based problems while submitting assignments/discussions/comments/exams, the following procedure must be followed:

1. Students must report the problem to the help desk. You may reach the helpdesk at 1-866-656-5511.
2. Students must file their problem with the helpdesk and obtain a helpdesk ticket number
3. Once a helpdesk ticket number is in your possession, students should email me to advise me of the problem and provide me with the helpdesk ticket number.
4. I will call the helpdesk to confirm your problem and follow up with you

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PLEASE NOTE: Your personal computer and internet access problems are not a legitimate excuses for filing a ticket with the Pearson LearningStudio Help Desk. Only Pearson LearningStudio based problems are legitimate reasons to contact the Help Desk.

You strongly are encouraged to check for your internet browser compatibility **BEFORE** the course begins and take the Pearson LearningStudio tutorial offered for students who may require some extra assistance in navigating the Pearson LearningStudio platform.

myLeo Support

Your myLeo email address is required to send and receive all student correspondence. Please email helpdesk@tamuc.edu or call us at 903-468-6000 with any questions about setting up your myLeo email account. You may also access information at myLeo. <https://leo.tamuc.edu>

Learner Support

The One Stop Shop was created to serve you by providing as many resources as possible in one location. <http://www.tamuc.edu/admissions/onestopshop/>


The Academic Success Center provides academic resources to help you achieve academic success. <http://www.tamuc.edu/campusLife/campusServices/academicSuccessCenter/>

FREE MOBILE APPS

The Courses apps for phones have been adapted to support the tasks students can easily complete on a smaller device. Due to the smaller screen size course content is not presented.

The Courses app is free of charge. The mobile Courses Apps are designed and adapted for different devices.

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	App Title:	iPhone – Pearson LearningStudio Courses for iPhone Android – LearningStudio Courses - Phone
	Operating System:	iPhone - OS 6 and above Android – Jelly Bean, Kitkat, and Lollipop OS
	iPhone App URL:	https://itunes.apple.com/us/app/pearson-learningstudio-courses/id977280011?mt=8
	Android App URL:	https://play.google.com/store/apps/details?id=com.pearson.lsphone

Once downloaded, search for Texas A&M University-Commerce, and it should appear on the list. Then you will need to sign into the myLeo Mobile portal.

The Courses App for Android and iPhone contain the following feature set:

- View titles/code/Instructor of all Courses enrolled in online

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- View and respond to all discussions in individual Courses
- View Instructor Announcements in individual Courses
- View Graded items, Grades and comments in individual Courses
- Grade to Date
- View Events (assignments) and Calendar in individual Courses
- View Activity Feed for all courses
- View course filters on activities
- View link to Privacy Policy
- Ability to Sign out
- Send Feedback

LearningStudio Notifications

Students can be alerted to course activities via text on their mobile phones or up to two email addresses.

Based on their preferences, students can automatically receive a push notification with every new: course announcement, threaded discussion post, grade, and/or assignment without having to login to the course. Enrolled students will automatically receive email notifications for announcements and can opt out of this feature. To receive text notifications, students must opt in.

To begin setting up notifications, go into your course in LearningStudio and click on the bell-shaped Notifications icon on the main menu ribbon.

By default the student's university email address will appear. This cannot be changed in LearningStudio. Additional email addresses may be added by clicking the Add button. After all of the other selections are completed be sure to click the Save and Finish button.

UNIVERSITY PROCEDURES/POLICIES

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the Student Guidebook.

<http://www.tamuc.edu/admissions/registrar/documents/studentGuidebook.pdf>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: Netiquette

<http://www.albion.com/netiquette/corerules.html>

TAMUC Attendance

For more information about the attendance policy please visit the Attendance webpage and Procedure 13.99.99.R0.01.

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

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<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

Academic Integrity

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

Undergraduate Academic Dishonesty 13.99.99.R0.03

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

Graduate Student Academic Dishonesty 13.99.99.R0.10

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf>

ADA Statement

Students with Disabilities

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

Texas A&M University-Commerce

Gee Library- Room 132

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: Rebecca.Tuerk@tamuc.edu

Website: Office of Student Disability Resources and Services

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

Nondiscrimination Notice

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who

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have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the Carrying Concealed Handguns On Campus document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

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