

**COURSE NAME; NUMBER; SEMESTER; MEETING DAYS, TIMES, AND PLACE.**

Animal Science

11:067:142, 3 credits      Fall, 2022

This course will be offered in an IN-PERSON format.

Class meetings will be held in Loree 022 on Monday and Thursday from 10:20 – 11:40 AM

To access the course, log into the Canvas web site (<https://canvas.rutgers.edu>). For more information about course access or support, contact the Canvas Help Desk via email at [help@canvas.rutgers.edu](mailto:help@canvas.rutgers.edu) or call 877-361-1134.

**CONTACT INFORMATION:**

Instructor and Course Coordinator: Professor Henry Bignell

Office Location: 120 Bartlett Hall

Phone: 848-932-9404      Email: [h.bignell@rutgers.edu](mailto:h.bignell@rutgers.edu)

Office Hours: By Appointment

**PREREQUISITES:** None

**Guest Speakers:**

Dr. Anna Hausmann	213D Bartlett Hall	<a href="mailto:anna.hausmann@rutgers.edu">anna.hausmann@rutgers.edu</a>	848-932-9240
Topics: Animal Health and Companion Animals			
Dr. Barry Jesse	213C Bartlett Hall	<a href="mailto:barry.jesse@rutgers.edu">barry.jesse@rutgers.edu</a>	848-932-9095
Topics: Genetics and Biotechnology			
Dr. Karyn Malinowski	155 ASB II	<a href="mailto:karynmal@njaes.rutgers.edu">karynmal@njaes.rutgers.edu</a>	848-932-9419
Topics: World of Horses, Equine Industry			
Dr. Dave Reimer	Nelson Bio Labs	<a href="mailto:reimerd@las.rutgers.edu">reimerd@las.rutgers.edu</a>	848-445-7394
Topic: Working Safely with Animals			
Dr. Taylor Ross	118 Bartlett Hall	<a href="mailto:t.ross@rutgers.edu">t.ross@rutgers.edu</a>	848-932-8354
Topics: Animal Behavior and Animal Welfare			
Dr. Mehmet Uzumcu	119 Bartlett Hall	<a href="mailto:uzumcu@rutgers.edu">uzumcu@rutgers.edu</a>	848-932-6912
Topic: Lab Animals			
Dr. Michael Westendorf	213F Bartlett Hall	<a href="mailto:michael.westendorf@rutgers.edu">michael.westendorf@rutgers.edu</a>	848-932-9408
Topic: Dairy Cattle			
Dr. Aparna Zama	209A Bartlett Hall	<a href="mailto:zama@sebs.rutgers.edu">zama@sebs.rutgers.edu</a>	848-932-8495
Topic: Physiology			

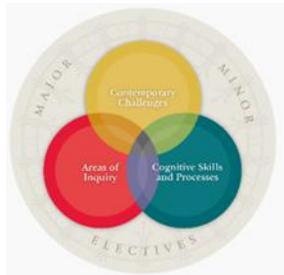
### COURSE WEBSITE, RESOURCES AND MATERIALS:

- Lecture notes, supplementary readings and videos will be posted on <https://canvas.rutgers.edu>. Login to the site using your NetID and password. If you are enrolled in the course you'll find the course listed on the Courses tab.
- The textbook for the class is Introduction to Animal Science, 6<sup>th</sup> edition, by W. Stephen Damron. Pearson Publishing, 2018. This textbook is highly recommended, **but not required.**
- Technology requirements
  - Computer (Macintosh – OS X or newer, or PC – Windows 8 or newer) with high-speed internet connection
  - Speakers
  - Built-in or external webcam
  - Built-in or external microphone
  - More information on [Canvas Basic Computer Specifications](#) and [Supported Browsers](#).

### COURSE DESCRIPTION:

This course presents fundamental principles and functions important in animal science. The scientific underpinnings of modern animal science are presented, with emphasis on nutrition, reproduction, animal domestication and behavior, animal welfare, genetics, and growth. The course deals with domestic animals, including both companion animals and livestock.

### LEARNING GOALS:



### CORE CURRICULUM LEARNING GOALS:

This course meets the Core Curriculum requirement for **Natural Sciences [NS]**. On completion, students will be able to understand and apply basic principles and concepts in the physical or biological sciences, and also to explain and be able to assess the relationship among assumptions, method, evidence, arguments, and theory in scientific analysis."

### PROGRAM LEARNING GOALS:

Program Learning Goal 2. Apply biological and chemical principles and quantitative reasoning to concepts presented in core subject areas in Animal Science such as physiology, nutrition, genetics, and reproduction.

Assessment: Based on weekly quizzes and biweekly exams.

### COURSE LEARNING GOALS:

By the end of this course you will

- 1) Gain an appreciation of the contributions that animals and animal products make to human well-being.
- 2) Understand the role that basic and applied science play in modern day animal science.
- 3) Obtain an overview of the varying Animal Science fields and their application to companion animals, lab animals and livestock.

## ASSIGNMENTS & GRADING:

### Grading

4 exams @ 50 points each      200 points (66.7%)

10 quizzes\* @ 10 points each   100 points (33.3%)

*\*11 Quizzes will be administered with the lowest quiz score dropped at the end of the semester\**

300 total points (100%)

Grade cutoffs:	A ≥ 90%
	B+ ≥ 85%
	B ≥ 80%
	C+ ≥ 75%
	C ≥ 70%
	D ≥ 60%
	F ≤ 60%

**Quizzes** will be conducted online in Canvas. Please see the schedule below for the dates of each of the quizzes. Quizzes will be available after the class period (12:00 PM - 11:30PM). Once you begin the quiz you will have 30 minutes to complete it – meaning you should start no later than 11:30 PM to have the full amount of time.

*For technical difficulties during the quizzes, contact the Canvas help desk for assistance at 877-361-1134, or [help@canvas.rutgers.edu](mailto:help@canvas.rutgers.edu).*

**Exams** will be conducted IN-PERSON during the class period. Students will have 80-minutes to complete the scantron exams.

**NOTE THAT MAKE-UP EXAMS ARE NOT GIVEN.** However, if you have a legitimate medical excuse for missing an exam or a religious observation/holiday, please contact the Dean of Students ([deanofstudents@echo.rutgers.edu](mailto:deanofstudents@echo.rutgers.edu)) as soon as possible for a letter of excusal.

### Extra Credit Opportunity:

There is an opportunity to obtain extra credit during the semester. In order to receive 10 *additional points, the value of one quiz, you must complete the entire process to obtain medical clearance to work with animals.* The procedure to obtain medical clearance to work with animals is a pdf file entitled Working With Animals and located under the Main menu on the [Department of Animal Science](#) home page. We will discuss this in class prior to being open for submission.

## ACADEMIC INTEGRITY

The university's policy on Academic Integrity is available at <http://academicintegrity.rutgers.edu/academic-integrity-policy>. The principles of academic integrity require that a student:

- properly acknowledge and cite all use of the ideas, results, or words of others.
- properly acknowledge all contributors to a given piece of work.
- make sure that all work submitted as his or her own in a course or other academic activity is produced without the aid of impermissible materials or impermissible collaboration.
- obtain all data or results by ethical means and report them accurately without suppressing any results inconsistent with his or her interpretation or conclusions.

- treat all other students in an ethical manner, respecting their integrity and right to pursue their educational goals without interference. This requires that a student neither facilitate academic dishonesty by others nor obstruct their academic progress.
- uphold the canons of the ethical or professional code of the profession for which he or she is preparing. Adherence to these principles is necessary in order to ensure that
  - everyone is given proper credit for his or her ideas, words, results, and other scholarly accomplishments.
  - all student work is fairly evaluated and no student has an inappropriate advantage over others.
  - the academic and ethical development of all students is fostered.
  - the reputation of the University for integrity in its teaching, research, and scholarship is maintained and enhanced.

Failure to uphold these principles of academic integrity threatens both the reputation of the University and the value of the degrees awarded to its students. Every member of the University community therefore bears a responsibility for ensuring that the highest standards of academic integrity are upheld.

## STUDENT CODE OF CONDUCT

Students are required to adhere to the [university student code of conduct](http://studentconduct.rutgers.edu/student-conduct-processes/university-code-of-student-conduct/#1495568095620-2f5ce77d-17dd) delineated in the Rutgers student affairs website [student conduct](http://studentconduct.rutgers.edu/student-conduct-processes/university-code-of-student-conduct/#1495568095620-2f5ce77d-17dd) page: <http://studentconduct.rutgers.edu/student-conduct-processes/university-code-of-student-conduct/#1495568095620-2f5ce77d-17dd>

## ACCOMMODATIONS

Rutgers university welcomes students with disabilities into all of the university's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a letter of accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the [registration form](https://webapps.rutgers.edu/student-ods/forms/registration) (<https://webapps.rutgers.edu/student-ods/forms/registration>).

## STUDENT SUPPORT SERVICES

### Academic Services:

- For academic support visit [rutgers academics student support](https://www.rutgers.edu/academics/student-support) at <https://www.rutgers.edu/academics/student-support>
- Any student can obtain tutoring and other help at the [learning centers](https://rlc.rutgers.edu/) on each campus. Check the website at <https://rlc.rutgers.edu/>
- For coaching help with writing skills and assignments visit the [writing coaching](https://rlc.rutgers.edu/student-services/writing-coaching) webpage at <https://rlc.rutgers.edu/student-services/writing-coaching>
- Many library resources are available online. Assistance is available through phone, email, and chat. For information, check the [rutgers libraries](https://www.libraries.rutgers.edu/) website at <https://www.libraries.rutgers.edu/>

## RUTGERS STUDENT HEALTH SERVICES:

[Rutgers student health services](http://health.rutgers.edu/) is dedicated to health for the whole student body, mind and spirit. It accomplishes this through a staff of qualified clinicians and support staff. Services are available at several locations throughout the New Brunswick-Piscataway area. For more information visit: <http://health.rutgers.edu/>

## VETERAN SERVICES:

Rutgers is proud to support veterans. If you are a veteran of the armed forces, please visit the [office of veteran and military programs and services](https://veterans.rutgers.edu/) website for more information: <https://veterans.rutgers.edu/>

**COURSE SCHEDULE:**

<b>Lecture</b>	<b>Date</b>	<b>Lecture Topic</b>	<b>Readings</b>	<b>Quiz &amp; Exam Schedule</b>
1	9/8	Intro; Animal Ag & Animal Products Henry Bignell	Chapter 1 - Introductory lecture	
2	9/12	Future of Animal Science Henry Bignell	Chapter 2 – Value of Animals to Humanity	
3	9/15	Working Safely With Animals Dr. Reimer	Lecture notes	<b>Quiz #1: Lectures 1 and 2</b> <i>Quiz on Canvas opens after class on 9/15</i>
4	9/19	Animal Behavior / Animal Welfare Dr. Ross	Chapter 13 – Animal Behavior Chapter 28 – Animal Welfare and Rights	
5	9/22	Nutrition I Henry Bignell	Chapter 5 – Introduction to Nutrition	<b>Quiz #2: Lectures 3 and 4</b> <i>Quiz on Canvas opens after class on 9/22</i>
6	9/26	Nutrition II	Chapter 6 – The Gastrointestinal Tract and Nutrition	
7	9/29	Nutrition III Henry Bignell	Chapter 7 – Feedstuffs Classification	<b>Quiz #3: Lectures 5, 6, and 7</b> <i>Quiz on Canvas opens after class on 9/29</i>
8	10/3	<b>EXAM 1</b>	<b>LECTURES 1-7</b>	<b>Exam #1: Lectures 1-7</b> <i>Exam during class period 10/3</i>
9	10/6	Reproductive Physiology I Dr. Zama	Chapter 11 – Animal Reproduction	
10	10/10	Reproductive Physiology II Dr. Zama	Chapter 12 – Lactation	
11	10/13	Animal Genetics I Dr. Jesse	Chapter 8 – Genetics	<b>Quiz #4: Lectures 9 and 10</b> <i>Quiz on Canvas opens after class on 10/13</i>

<b>Lecture</b>	<b>Date</b>	<b>Lecture Topic</b>	<b>Readings</b>	<b>Quiz &amp; Exam Schedule</b>
12	10/17	Animal Genetics II Dr. Jesse	Chapter 9 – Animal Breeding	
13	10/20	Biotechnology Dr. Jesse	Chapter 10 – Biotechnology and Genetic Engineering	<b>Quiz #5: Lectures 11 and 12</b> <i>Quiz on Canvas opens after class on 10/20</i>
14	10/24	Animal Diseases/Herd Health Dr. Hausmann	Chapter 14- Animal Health	<b>Quiz #6: Lectures 13 and 14</b> <i>Quiz on Canvas opens after class on 10/24</i>
15	10/27	<b>EXAM 2</b>	<b>LECTURES 9-14</b>	<b>Exam #2: Lectures 9-14</b> <i>Exam during class period 10/27</i>
16	10/31	The World of Horses Dr. Malinowski	Lecture notes	
17	11/3	Equine Industry Dr. Malinowski	Lecture notes	
18	11/7	Companion Animals Dr. Hausmann	Chapter 23 – Pet and Companion Animals	<b>Quiz #7: Lectures 16 and 17</b> <i>Quiz on Canvas opens after class on 11/7</i>
19	11/10	Lab Animals Dr. Uzumcu	Lecture notes	
20	11/14	Animal Domestication Henry Bignell	Lectures notes	<b>Quiz #8: Lectures 18 and 19</b> <i>Quiz on Canvas opens after class on 11/14</i>
21	11/17	Dairy Cattle Dr. Westendorf	Chapter 17 – Dairy Cattle	<b>Quiz #9: Lectures 20 and 21</b> <i>Quiz on Canvas opens after class on 11/17</i>
22	11/21	<b>EXAM 3</b>	<b>LECTURES 16-21</b>	<b>Exam #3: Lectures 16-21</b> <i>Exam during class period 11/21</i>

Lecture	Date	Lecture Topic	Readings	Quiz & Exam Schedule
23	11/22	Farm Tour-Sheep, goats & swine	Watch videos (on canvas) prior to farm tour	
24	11/28	Farm Tour-Cattle and Horses	Watch videos (on canvas) prior to farm tour	
25	12/1	Beef Cattle Henry Bignell	Chapter 16 – Beef Cattle	
26	12/5	Sheep & Goats Henry Bignell	Chapter 20 – Sheep and Goats	<b>Quiz #10:</b> <b>Lectures 25 and 26</b> <i>Quiz on Canvas opens after class on 12/5</i>
27	12/8	Poultry Henry Bignell	Chapter 18- Poultry	
28	12/12	Swine Henry Bignell	Chapter 19 – Swine	<b>Quiz #11:</b> <b>Lectures 27 and 28</b> <i>Quiz on Canvas opens after class on 12/12</i>

**\*EXAM 4 DURING FINALS WEEK 12-22-22 FROM 8-11AM - LECTURES 23-28\***

**Note:** Due to the number of guest speakers, the Course Schedule is subject to change.

If this occurs Professor Bignell will provide notice of changes as soon as possible via announcements on canvas.

\*\*\*Two class periods (11/22; 11/28) will be held on the Cook Campus Farm with a starting location at the Round House. The Round House is located directly off of College Farm Road on Sheepfold Lane. Given the size of the class, we will need to split into two separate groups that meet for only half of the designated class period.

If your last name begins with:

M-Z: Report to the Round House by 10:20 AM

A-L: Report to the Round House by 11:00 AM