

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

Introduction to Animal Science

11:067:142, 3 credits Fall, 2023

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

Class meetings will be held in Loree 022 on Tuesday and Thursday from 2:00 – 3:20 PM

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 or call 833-648-4357.

CONTACT INFORMATION:

Instructor and Course Coordinator: Professor Henry Bignell

Office Location: 120 Bartlett Hall

Phone: 848-932-9404 Email: h.bignell@rutgers.edu

Office Hours: By Appointment

Undergraduate Teaching Assistants: Jacob Bazer, Sakhee Daga, Analiese Haag, and Jenna Moran

PREREQUISITES: None

Guest Speakers:

Dr. Carol Bagnell	126 Foran Hall	carol.bagnell@rutgers.edu	848-932-6334
Topics: Animal Reproduction			
Dr. Nicholas Bello	121 Bartlett Hall	ntbello@rutgers.edu	848-932-2966
Topics: Integrative Physiology			
Dr. Karyn Malinowski	155 ASB II	karynmal@njaes.rutgers.edu ;	848-932-9419
Topics: World of Horses, Equine Industry			
Dr. Dave Reimer	Nelson Bio Labs	reimerd@las.rutgers.edu ;	848-445-7394
Topic: Working Safely with Animals			
Dr. Taylor Ross	118 Bartlett Hall	t.ross@rutgers.edu	848-932-8354
Topics: Animal Domestication, Behavior, and Welfare. Companion Animals			
Dr. Elizabeth Snyder	328 Foran Hall	elizabeth.snyder@rutgers.edu	848-932-6377
Topics: Genetics and Biotechnology			
Dr. Mehmet Uzumcu	119 Bartlett Hall	uzumcu@rutgers.edu	848-932-6912
Topic: Lab Animals			
Dr. Michael Westendorf	213F Bartlett Hall	michael.westendorf@rutgers.edu	848-932-9408
Topic: Dairy Cattle			
Dr. Carey Williams	213E Bartlett Hall	carey.williams@rutgers.edu	
Topic: Animal Nutrition			

Dr. Aparna Zama 209A Bartlett Hall zama@sebs.rutgers.edu;
Topic: Animal Diseases and Herd Health Management

848-932-8495

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, 6th 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 scores dropped at the end of the semester

300 total points (100%)

Grades:	A = 100-90.0%
	B+ = 89.9-85.0%
	B = 84.9-80.0%
	C+ = 79.9-75.0%
	C = 74.9-70.0%
	D = 69.9-60.0%
	F = 59.9-0%

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 at 5pm and will close at 11:59 PM the following day (31-hour window). Once you begin the quiz you will have 15 minutes to complete it – meaning you should start no later than 11:44 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.

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 (<https://studentsupport.rutgers.edu/services/absence-and-verification-notices>) 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 5 *additional points*, 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](#) delineated in the Rutgers student affairs website [student conduct](#) page: <http://studentconduct.rutgers.edu/student-conduct-processes/university-code-of-student-conduct/#1495568095620-2f5ce77d-17dd>

SEBS DEI STATEMENT

It is our intention that students of all backgrounds will be well served by this course. We will work to create an environment of inclusion which respects and affirms the inherent dignity, value, and uniqueness of all individuals, communities and perspectives. We are lucky to have a diverse university. Diverse voices and life experiences enhance the learning process and we welcome students to share their personal experiences. We will not tolerate disrespectful language or behavior against any individual or group. If you feel as though you have been disrespected or treated unfairly by the instructors or any other individual please let us know. You may speak with the instructors in person, over email or report anonymously via the Office of Academic Programs. In addition, you may also report bias to the Rutgers Diversity and Inclusion initiative using this link: <http://inclusion.rutgers.edu/report-bias-incident/>.

STUDENT WELLNESS SERVICES

Counseling, ADAP & Psychiatric Services (CAPS)

(848) 932-7884 / 17 Senior Street, New Brunswick, NJ 08901/ www.rhscaps.rutgers.edu/

CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professional within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners.

Violence Prevention & Victim Assistance (VPVA)

(848) 932-1181 / 3 Bartlett Street, New Brunswick, NJ 08901 / www.vpva.rutgers.edu/

The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932-1181.

Disability Services

(848) 445-6800 / Lucy Stone Hall, Suite A145, Livingston Campus, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854 / <https://ods.rutgers.edu/>

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 on the ODS web site at: <https://webapps.rutgers.edu/student-ods/forms/registration>.

DoSomething button through Rutgers Dean of Students office:
<http://health.rutgers.edu/do-something-to-help/>

Wellness Coaching through Rutgers HOPE:
<http://health.rutgers.edu/education/hope/wellness-coaching/>

Self-Help Apps found on the Rutgers Student Health website:
<http://health.rutgers.edu/education/self-help/self-help-apps/>

NJ Hopeline - (1-855-654-6735) | **National Suicide Hotline** - (1-800-273-8255)

BASIC NEEDS RESOURCES

Any student who has difficulty affording groceries or accessing sufficient food, or who lacks a safe and stable place to live, is urged to contact the Rutgers Student Food Pantry and/or the Dean of Students (details below). Furthermore, please notify the professor if you are comfortable doing so, as they may be able to provide additional support.

Rutgers Student Food Pantry

848-932-5500 / College Ave Student Center, Room 115 (126 College Ave) /

<http://ruoffcampus.rutgers.edu/food/>

Check their website for hours and additional locations. The Rutgers Student Food Pantry is dedicated to helping all Rutgers students in need of food, no questions asked. Students will be provided with groceries that typically last about one week.

Dean of Students Office

848-932-2300 / 88 College Avenue, New Brunswick, NJ 08901 / <https://deanofstudents.rutgers.edu/>

Mon-Fri, 8:30am-5:00pm

The Dean of Students Office at Rutgers University-New Brunswick provides solutions, services, and support to help students navigate Rutgers University. The Office serves as a student support network by providing advocacy, problem resolution, and critical incident intervention for those times when additional assistance is needed. Please call to schedule an appointment to meet with a representative from the Dean's office.

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:

Lecture	Date	Lecture Topic	Readings	Quiz & Exam Schedule
1	9/5	Intro and Syllabus; Animal Ag & Animal Products Professor Bignell	Chapter 1 - Introductory lecture	
2	9/7	Animal Agritourism Professor Bignell	Chapter 2 – Value of Animals to Humanity	Quiz #1: Lectures 1 and 2 <i>Open: 9/7 at 5PM</i> <i>Closes: 9/8 at 11:59PM</i>
3	9/12	Animal Domestication/Behavior/Welfare Dr. Ross	Chapter 13 – Animal Behavior Chapter 28 – Animal Welfare and Rights	
4	9/14	Working Safely with Animals Dr. Reimer	Lecture notes	Quiz #2: Lectures 3 and 4 <i>Open: 9/14 at 5PM</i> <i>Closes: 9/15 at 11:59PM</i>
5	9/19	Animal Nutrition I Dr. Williams	Chapter 5 – Introduction to Nutrition	
6	9/21	Animal Nutrition II Dr. Williams	Chapter 6 – The Gastrointestinal Tract and Nutrition Chapter 7- Feedstuffs	Quiz #3: Lectures 5 and 6 <i>Open: 9/21 at 5PM</i> <i>Closes: 9/22 at 11:59PM</i>
7	9/26	EXAM 1	LECTURES 1-6	Exam #1: Lectures 1-6 <i>Exam in person during class period 9/26</i>
8	9/28	Animal Diseases/Herd Health Dr. Zama	Chapter 14- Animal Health	
9	10/3	Integrative Physiology Dr. Bello	Lecture notes	
10	10/5	Animal Reproduction I Dr. Bagnell	Chapter 11 – Animal Reproduction	Quiz #4: Lectures 8 and 9 <i>Open: 10/5 at 5PM</i>

Lecture	Date	Lecture Topic	Readings	Quiz & Exam Schedule
				<i>Closes: 10/6 at 11:59PM</i>
11	10/10	Animal Reproduction II Dr. Bagnell	Chapter 12 – Lactation	
12	10/12	Animal Genetics Dr. Snyder	Chapter 8 – Genetics Chapter 9 – Animal Breeding	Quiz #5: Lectures 10 and 11 <i>Open: 10/12 at 5PM</i> <i>Closes: 10/13 at 11:59PM</i>
13	10/17	Biotechnology Dr. Snyder	Chapter 10 – Biotechnology and Genetic Engineering	
14	10/19	Farm Tour- Cattle and Small Ruminants	Watch videos (on canvas) prior to farm tour	Quiz #6: Lectures 12, 13 and 14 <i>Open: 10/19 at 5PM</i> <i>Closes: 10/20 at 11:59PM</i>
15	10/24	EXAM 2	LECTURES 8-14	Exam #2: Lectures 8-14 <i>Exam in person during class period 10/24</i>
16	10/26	Farm Tour- Horses and Swine	Watch videos (on canvas) prior to farm tour	
17	10/31	Zoo Animals Professor Bignell	Lecture notes	
18	11/2	Poultry Professor Bignell	Chapter 18- Poultry	Quiz #7: Lectures 16, 17, and 18 <i>Open: 11/2 at 5PM</i> <i>Closes: 11/3 at 11:59PM</i>
19	11/7	Lab Animals Dr. Uzumcu	Lecture notes	
20	11/9	Companion Animals Dr. Ross	Chapter 23 – Pet and Companion Animals	Quiz #8: Lectures 19 and 20 <i>Open: 11/9 at 5PM</i> <i>Closes: 11/10 at 11:59PM</i>
21	11/14	Dairy Cattle Dr. Westendorf	Chapter 17 – Dairy Cattle	
22	11/16	Beef Cattle Professor Bignell	Chapter 16 – Beef Cattle	Quiz #9: Lectures 21 and 22 <i>Open: 11/16 at 5PM</i> <i>Closes: 11/17 at 11:59PM</i>
23	11/21	EXAM 3	LECTURES 16-22	Exam #3: Lectures 16-22 <i>Exam in person during class period 11/21</i>
24	11/28	World of Horses Dr. Malinowski	Lecture notes	
25	11/30	Equine Industry Dr. Malinowski	Lecture notes	Quiz #10: Lectures 24 and 25 <i>Open: 11/30 at 5PM</i>

Lecture	Date	Lecture Topic	Readings	Quiz & Exam Schedule
				<i>Closes: 12/1 at 11:59PM</i>
26	12/5	Small Ruminants Professor Bignell	Chapter 20 – Sheep and Goats	
27	12/7	Swine Professor Bignell	Chapter 19- Swine	Quiz #11: Lectures 26 and 27 <i>Open: 12/7 at 5PM Closes: 12/8 at 11:59PM</i>
28	12/12	Future of Animal Science Professor Bignell	Chapter 29	
29	12/19	EXAM 4	LECTURES 24-28	<i>Final exam is not cumulative. FINAL EXAM IS IN PERSON IN OUR NORMAL CLASSROOM FROM 12-1:20PM</i>

***EXAM 4 DURING FINALS WEEK: 12-19-23 FROM 12-1:20PM - LECTURES 24-28 (NOT CUMULATIVE)**

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 (10/19; 10/26) 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 2:00 PM

A-L: Report to the Round House by 2:40 PM