RUTGERS
School of Environmental and Biological Sciences

COURSE SYLLABUS

COURSE NAME; NUMBER; SEMESTER; MEETING DAYS, TIMES, AND PLACE.
Animal Nutrition, 11:067:330:90, 3 credits, Fall 2023

This course will be offered in an IN-Person format. There may be times when remote instruction and participation is warranted - participation in remote content is mandatory and will affect your grade!

Class meetings will be held in the Cook/Douglass Lecture Hall Room 102 on Mondays and Thursdays from 10:20am- 11:40am.

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

PREREQUISITES: 2 semesters and general biology and 2 semesters of general chemistry

COURSE WEBSITE, RESOURCES AND MATERIALS:

- We will be using Canvas for this course. You will log into the site (https://Canvas.rutgers.edu) using your net id and password. This will take you to the course homepage. On this page, you will find links to all the modules, announcements, document sharing, and zoom meetings. For tech help with Canvas please visit https://it.rutgers.edu/help-support. If you cannot access the Canvas website, please call the Canvas IT department at 877-361-1134 or you can email them at: help@canvas.rutgers.edu. If you are new to the Canvas system, you can access the following website for an overview of the program: https://canvas.rutgers.edu/students/getting-started-in-canvas-students/
- The recommended textbooks for the course are "Animal Feed, Feeding, and Nutrition and Ration Evaluation by David Tisch and Basic Animal Nutrition and Feeding; by Pond, Church, Pond, and Schoknecht, 5th edition (2005), John Wiley. Many of the concepts that are discussed and presented in the text complement the material in the modules. In addition, this is a solid reference text that you can keep for a long time. The books are available online from the Rutgers bookstore or on amazon.com.
- 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:

Animal nutrition is designed to provide the student with a basic background of the variety of factors that must be considered when feeding any animal. Regardless of whether the student is feeding a cow, horse, dog, elephant or even a snake, there is a set of basic questions that need to be answered. This course will spend a large amount of time discussing the domestic species because the most is known about these animals, but it is important to think about how that information applies more broadly.
The course is divided into four sections. The first section deals with anatomy and physiology, the second section will cover metabolism and biochemistry, the third section will focus on how to feed specific physiological states and the fourth section will focus on how to feed specific species.

PROGRAM LEARNING GOALS:
https://animalsciences.rutgers.edu/undergraudate/mission.htm
Students will:

- Critically evaluate different methods and models that are used to determine feed quality (PLG 2)
  - Assessment: Quizzes, in-class assignments, and exams
- Develop an understanding of the various digestive processes and strategies used by different species (PLG 3)
  - Assessment: Quizzes, in-class assignments, and exams
- Gain an appreciation of the major nutrients and how they are utilized by various types of animals (PLG 2)
  - Assessment: Quizzes, in-class assignments, and exams
- Evaluate various types of diets that are used during and animal's different life stages and production as well as the appropriate diets that are fed to the major animal species (PLGs 1 and 3)
  - Assessment: Quizzes, in-class assignments, and exams

ASSIGNMENTS & GRADING:
Grading will be assigned based on the results of the following:

- Four 30-minute quizzes (15 points each – 60 points total) 14% total
  (Quizzes will be on canvas)
- Eight in-class assignments (10 points – 70 points total) 16% total
  (Lowest grade will be dropped)
- Four exams (100 points- 300 points total) 70% total
  (Lowest exam grade will be dropped)

There are NO make - up exams, assignments, or quizzes.
There will be 4 exams throughout the course. The final exam will not be cumulative. Your lowest exam grade will be dropped. You have already received the times and dates of the exams so you can schedule your activities accordingly. No excuses will be accepted after the exam dates have passed. 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.

There will be 4 quizzes given once per exam period. The quizzes will be available on the Canvas site at 12 noon after class and you will have 24 hours to complete the quiz. Once you access the quiz, it will be available for 30 minutes. The quizzes will cover the material for the section to prepare you for the exam. There are NO make-up quizzes.

There will be 8 in class assignments, 2 per section of the course. The lowest grade will be dropped. Please bring a sheet of paper with you to class to submit your assignment.

The maximum number of points that can be accumulated is 430. Your grade will be based on the accumulation of total points from the above activities: (3 exams, 4 quizzes and 7 in-class assignments).

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%

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 at https://www.rutgers.edu/academics/student-support
- Any student can obtain tutoring and other help at the learning centers on each campus. Check the website at https://rlc.rutgers.edu/
- For coaching help with writing skills and assignments visit the 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 website at https://www.libraries.rutgers.edu/

RUTGERS STUDENT HEALTH SERVICES:
Rutgers student health services 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 website for more information: https://veterans.rutgers.edu/

COURSE SCHEDULE:

Lecture	Date	Lecture Topic	In-Class Assignments (ICA), Quizzes & Exams Schedule
1	9/7	Introduction/Basic Concepts	
2	9/11	Feeds and Feedstuff	
3	9/14	Assessing Nutritive Value	**ICA 1**
4	9/18	Comparative Anatomy	
5	9/21	Rumen Fermentation	**ICA 2**
6	9/25	Nutrient Digestion	
7	9/28	Energy Balance	**Quiz 1 Open@ 12:00pm EST Due 9/29 @ 12:00pm EST**
8	10/2	**Exam 1 Lectures 1-7**	
9	10/5	Introduction to Nutrients	
10	10/9	Bioenergetics	**ICA 3**
11	10/12	Carbohydrates	
12	10/16	Volatile Fatty Acids	**ICA 4**
13	10/19	Lipids	
14	10/23	Proteins	**Quiz 2 Open@ 12:00pm EST Due 10/24 @ 12:00pm EST**
15	10/26	**Exam 2 Modules 9-14**	
16	10/30	Vitamins and Minerals	
17	11/2	Practical Nutrition	**ICA 5**
18	11/6	Maintenance	
19	*11/9*	*Reproduction*	***Online Recorded Lecture***
20	11/13	Lactation	**ICA 6**
21	11/16	Growth	**Quiz 3 Open@ 12:00pm EST Due 11/17 @ 12:00pm EST**
22	11/20	**Exam 3 Lectures 16-21**	
23	*11/21*	*Poultry Nutrition*	
24	11/27	Beef Cattle Nutrition	**ICA 7**
25	11/30	Swine Nutrition	
26	12/4	Equine Nutrition	
27	12/7	Cats and Dog Nutrition	**ICA 8**
28	12/11	Sheep and Goats Nutrition	**Quiz 4 Open@ 12:00pm EST Due 12/12 @ 12:00pm EST**
29	12/21	**Final Exam Lectures 23-28**	*Final exam is not cumulative. FINAL EXAM IS IN PERSON IN OUR NORMAL CLASSROOM FROM 8-9:20AM*