

ANIMAL DISEASES (3 credits)

11:067:404, Fall 2024

IN-PERSON CLASS MEETINGS

Mondays and Wednesdays, 2:00 PM – 3:20 PM (US Eastern Standard Time)

Bartlett 123

CONTACT INFORMATION

Instructor(s): Aparna Zama, Ph.D.

Office Location: Bartlett Hall, 209A

Phone: 848-932-8495

Email: zama@sebs.rutgers.edu

Office Hours: By appointment, email or use this link: [Zama Appointments](#)

COURSE WEBSITE, RESOURCES AND MATERIALS

- All lectures and related resources will be added to **canvas.rutgers.edu**
 - It is the responsibility of the student to access the Canvas site regularly and keep up with the content and the assessments.
- **No required textbook.**
- Online resources: www.cdc.gov and The Merck Veterinary Manual, www.merckvetmanual.com
- Additional readings will be provided via the Canvas site.

TECHNOLOGY REQUIREMENTS

- Computer (Macintosh – OS X or newer, or PC – Windows 8 or newer) with high-speed internet connection
- Some quizzes and exams will be on Canvas Quizzes on your mobile phone or laptop

PREREQUISITES: General Biology 01:119:115-116. Seniors only.

COURSE DESCRIPTION

An upper-level course focused on infectious diseases in domestic animals and humans. Examples of bacterial, viral and parasitic diseases are used to illustrate fundamental principles in the transmission, pathogenesis, treatment and control of disease.

COURSE LEARNING GOALS (see <https://animalsciences.rutgers.edu/undergraduate/mission.htm> for the list of Animal Science program learning goals (PLGs))

Students will:

1. Develop an understanding of disease causing organisms in domestic species and humans. (PLG 3)
Assessment: Three hourly exams and weekly quizzes and assignments.
2. Utilize biological concepts to learn pathophysiological processes involved in infectious diseases along with disease diagnosis, treatment, prevention, and control. (PLGs 2 & 3)
Assessment: Three hourly exams and weekly quizzes. Periodic assignments will be given to review prior knowledge in biology, chemistry, and physiology.
3. Understand basic epidemiological concepts. (PLG 3)
Assessment: Three hourly exams and weekly quizzes and assignments.
4. Communicate their understanding of infectious disease outbreaks occurring in the world to classroom learning. (PLG 6)
Assessment: Essays will be assessed for content as well as clarity of expression and analysis of case studies.

EXAMS & ASSESSMENTS:

Three 80-min exams (20% each)	60%
Five assignments (3% each)	15%
Six 10-min quizzes (~4% each)	25%

Assignments are due at 11:59 PM on dates mentioned in the table below will be submitted online on Canvas. The 10-min quizzes and the 80-min exams will be in-person, in-class on the scheduled dates. Please bring your mobiles and laptops to class to take the quizzes and exams.

ASSESSMENT RUBRIC FOR ASSIGNMENTS

Assignments 				
Criteria	Ratings			Pts
Details	5 to >3 pts Full Marks Details are fully presented.	3 to >0 pts Limited Limited details provided.	0 pts No Marks No details provided.	5 pts
Following assignment instructions	2 to >0 pts Full Marks	0 pts No Marks		2 pts
Originality	3 to >0 pts Full Marks Original content- self-written. <15% overlap with other sources.	0 pts No Marks Content overlaps with lecture content or online or other published sources. Based on Turnitin match >15%.		3 pts
				Total Points: 10

TENTATIVE ASSIGNMENT, QUIZ, and EXAM SCHEDULE (DETAILS CAN BE FOUND ON CANVAS)

	ASSIGNMENT DUE DATES (Due at 11:59 PM on dates mentioned)		QUIZ DUE DATES (Due in class on dates mentioned)		EXAM DUE DATES (Due in class on dates mentioned)
Assignment 1	9/16	Quiz 1 (1-3)	9/18		
Assignment 2	9/23	Quiz 2 (4-5)	9/25	Exam 1	10/07
Assignment 3	10/21	Quiz 3 (9-10)	10/16		
Assignment 4	11/11	Quiz 4 (11-14)	10/30	Exam 2	11/13
		Quiz 5 (21-22)	11/25		
Assignment 5	12/04	Quiz 6 (23-26)	12/9	Exam 3	12/18

ABSENCE POLICY

There are no make-ups for *quizzes*. If there are requests for make-up *exams*, instructor must be informed 24 hours BEFORE the scheduled exam. *No excuses will be accepted after the exam dates have passed.* If you have standing religious observations/holidays, please contact instructor immediately at the start of the semester.

GRADING SCHEME

Grades will be calculated as follows:

A = 88% or above, B+ = 84% - 87%, B = 78% - 83%, C+ = 73% - 77%, C = 66% - 72%, D = 56% - 65%, F = less than 55%

Course Schedule

<u>Date</u>	<u>Lecture Topic</u>
Sep	09 1) Introduction – Types of diseases
	11 2) The Host-Parasite Relationship and Transmission of Infectious Diseases
	16 3) Bacteria: Types, Structure, Function
	18 4) Bacterial foodborne diseases
	23 5) Bacterial waterborne diseases
	25 6) Bacterial sexually transmitted diseases
	30 7) Bacterial cutaneous/airborne diseases/vector-borne diseases
Oct	02 8) Mid-Term 1 Review
	07 Mid-term exam #1 (1 hour, lectures 1-7, Sep 09 – Sep 30)
	09 9) Immune system
	14 10) Immunodiagnostic Methods
	16 11) Introduction to viruses
	21 12) Viral diversity and detection methods
	23 13) Rinderpest, Pseudo Rinderpest
	28 14) Influenza (avian, swine)
	30 15) Human Immunodeficiency Virus/ AIDS
Nov	04 16) Viral hemorrhagic fevers
	06 17) Feline and Canine viral diseases
	11 18) Mid-Term 2 Review
	13 Mid-term #2 (1 hour, lectures 9-17, Oct 09 – Nov 06)
	18 19) Transmissible spongiform encephalopathies
	20 20) Fungal diseases, Ectoparasites, Screwworm myiasis
	25 21) Introduction to eukaryotic parasites
Dec	02 22) Diseases caused by Nematodes, Trematodes, Cestodes
	04 23) Vaccines/Pharmacology
	09 24) Bovine and Equine diseases on the farm
	11 25) Final Exam Review session
	18 Final exam, Lectures 19 – 24, Comprehensive for topics

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.

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 me and discuss the accommodations as early in this course as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>.

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.

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, Mon-Fri, 8:30am-5:00pm. <http://deanofstudents.rutgers.edu/>

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.

Diversity 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 acknowledge that some of the topics covered in this course may be emotionally difficult at times. We ask that you engage in discussion with care and empathy for the other members in the classroom. 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/>.

We are still in the process of learning about diverse perspectives and identities and always welcome discussion or anonymous feedback on how we can continue to improve. If you have a name and/or set of pronouns that differ from those that appear in your official Rutgers records, we would like to know so we can respect them.