

ANIMAL DISEASES (3 credits)

11:067:404, Fall 2020

Live Meetings on Mondays and Thursdays, 10:55 AM – 12:15 PM (US Eastern Standard Time)

Live Meetings on **Canvas Conferences**

Synchronous Remote Mode of Instruction

CONTACT INFORMATION

Instructor(s): Aparna Zama, Ph.D

Office Location: Bartlett Hall, 209A (just FYI, physical location in a typical semester)

Phone: 848-932-8495

Email: zama@rutgers.edu

Office Hours: By appointment, email or use aparnazama.youcanbook.me

COURSE WEBSITE, RESOURCES AND MATERIALS

- All lectures and related resources will be added to **canvas.rutgers.edu**
 - Lecture recordings will be available on **Canvas Conferences**
 - It is the responsibility of the student to access the Canvas site regularly and keep up with the content and the assessments.
- No 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
- Speakers, built-in or external, webcam, and microphone
- More information on <https://coronavirus.rutgers.edu/technology-resources-for-students/>
- Online proctoring will be utilized during exams. Therefore, by signing up for this course, students are giving consent to being recorded for authentication. Privacy should be maintained during the exams.

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 one-hour exams (20% each)	60%
Five assignments (3% each)	15%
Six 15-min quizzes (~4% each)	25%

All assessments will be online and online proctoring will be set-up for exams and quizzes. Therefore, webcams will need to be activated at the instructor's request. The 15-min quizzes will be open for 24-hour windows and the 60-min exams will be open in class hours, on the scheduled dates. Assignments and quizzes are due at 11:59PM on dates mentioned in the table below.

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 at 11:59 PM on dates mentioned)		EXAM DUE DATE (Open time: 10:55 AM- 12:15 PM on dates mentioned)
Assignment 1 (One Health)	9/8	Quiz 1 (1-3)	9/14		
Assignment 2 (PCR)	9/21	Quiz 2 (4-6)	9/24	EXAM 1	10/1
Assignment 3 (Diagnostics)	10/12	Quiz 3 (10-13)	10/19		
Assignment 4 (Public health response)	11/05	Quiz 4 (14-17)	10/29	EXAM 2	11/9
		Quiz 5 (21-22)	11/19		
Assignment 5 (Heartworm)	11/23	Quiz 6 (25-26)	12/07	EXAM 3	12/16

ABSENCE POLICY

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

GRADING SCHEMA


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 3	1) Introduction – Types of diseases
8 Mon	2) The Host-Parasite Relationship and Transmission of Infectious Diseases
10	3) Bacteria: Types, Structure, Function
14	4) Bacterial foodborne diseases
17	5) Bacterial waterborne diseases
21	6) Bacterial sexually transmitted diseases
24	7) Bacterial cutaneous/airborne diseases
28	8) Bacterial vectorborne diseases
Oct 1	Mid-term exam #1 (1 hour, lectures 1-8, Sep 3 – 28)
5	10) Immune system- 1
8	11) Immune system- 2
12	12) Introduction to viruses
15	13) Viral diversity and detection methods
19	14) Rinderpest, Pseudo Rinderpest
22	15) Influenza (avian, swine)
26	16) Vesicular diseases of farm animals
29	17) Human Immunodeficiency Virus/ AIDS
Nov 02	18) Viral hemorrhagic fevers
5	19) Feline and Canine viral diseases
Nov 9	20) Mid-term #2 (1 hour, lectures 10-19, Oct 5 – Nov 05)
12	21) Transmissible spongiform encephalopathies
16	22) Fungal diseases, Ectoparasites, Screwworm myiasis
19	23) Introduction to parasites
23	24) Nematodes, Trematodes, Cestodes
30	25) Vaccines/Pharmacology
Dec 3	26) Vaccines continued
7	27) Bovine and equine diseases on the farm
10	28) Review session
Dec 16	Final exam: tentative, 12 – 3:00 PM, lectures 21 – 27

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.
Following assignment instructions	2 to >0 pts Full Marks	0 pts No Marks	5 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%.	2 pts
			3 pts
Total Points: 10			

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 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://ods.rutgers.edu/students/registration-form>.

Scarlet Listeners

(732) 247-5555 / <http://www.scarletlisteners.com/>

Free and confidential peer counseling and referral hotline, providing a comforting and supportive safe space.