Semester	7 and 8		
Course Code:	MIBI 43834		
Course Name:	Veterinary Microbiology and Plant Pathology		
Credit Value:	4		
Core/Optional	Core		
Hourly Breakdown	Theory	Practical	Independent Learning
	60 hrs	-	140 hrs

Course Aim/Intended Learning Outcomes:

At the completion of this course student will be able to;

- Describe the aetiology, clinical manifestations and laboratory diagnostic methods of common and economically significant bacterial diseases affecting companion and farm animals
- Understand the methods of control, prevention and eradication of common and economically significant bacterial diseases affecting companion and farm animals
- Describe the aetiology, clinical manifestations and laboratory diagnostic methods of selected viral and fungal diseases affecting animals
- Explain the modes of transmission of infectious microbes from animals to the human population
- Discuss the economic and other consequences of microbial diseases in companion and farm animals,
- Understand the breadth of viral and fungal phytopathogens and identify their economic impact,
- Apply techniques to isolate, identify and characterize phytopathogens and identify appropriate measures to control plant diseases.

Course Content:

Veterinary Microbiology:

Introduction to veterinary microbiology, Common and economically significant bacterial diseases affecting companion and farm animals – etiology, clinical manifestations, sample collection and dispatch, appropriate diagnostic methods, prevention, control and eradication.

Economically significant viral and fungal diseases (selected) affecting companion and farm animals – etiology, clinical manifestations, sample collection and dispatch, standard laboratory diagnostic methods, prevention, control and eradication. Zoonoses: Modes of transmission and control.

Plant Pathology:

Plant Virology: Groups of plant viruses – classification and taxonomy. Plant viral diseases, symptomology and physiology of virus-infected plants. Acute vs chronic infections. Sattelite viruses, satellite RNAs and viroids. Methods used to detect and characterize plant viruses – immounological and DNA-based methods. Transmission of plant viruses. Plant resistance response to viral infections.

Fungal Plant Pathogens: Fungal disease development, Biotrophy, Haustorial structures and their function in disease development. Role of cytokines and polyamines.

Teaching /Learning Methods: A combination of lectures and assignments

Assessment Strategy: End of the course unit examination

Continuous Assessment	**Final Assessment**		
0%	100%		
Details:	Theory (%)	Practical (%)	Other (%)
N/A	100	-	-

Recommended Reading:

- Quinn, P. J., Markey, B. K., Leonard, F. C., Hartigan, P., Fanning, S. & K E. S. FitzPatric, (2011) *Veterinary Microbiology and Microbial Disease*. 2nd Ed. Wiley-Blackwell.
- Markey, B., Leonard, F., Archambault, M., Cullinane, A. & D. Maguire (2011) *Clinical Veterinary Microbiology*. 2nd Ed. Mosby.
- Merck Veterinary Manual (Available at: http://www.merckvetmanual.com/mvm/index.html)
- Agrios, G. N. (2005) *Plant Pathology*, 5th Edition, Elsevier Academic Press.
- Hull, R. (2013) *Mathew's Plant Virology*. 5th Edition. Academic Press.
- Related current review and research articles peer-reviewed journals as recommended by the lecturers.