

Class Description

Anaerobic Bacteriology- PH 622
5 credit hours-3 lecture, 6 lab

Course Description:

This course is designed for graduate students and deals with the principles of basic pathogenic anaerobic bacteriology, as it relates to poultry as a biological model. Primary emphasis is directed at the study of the development of disease caused by anaerobic bacteria, and a mastery of the basic techniques of anaerobic bacteriology. Basic clinical methodology, anaerobic bacterial identification, pathogenesis and the current literature will be discussed.

Course Objectives:

To aid advanced students in developing a working knowledge of: a) The pathogenesis of disease involving anaerobic bacteria b) current methods and techniques for the isolation, purification and identification of anaerobic bacteria from animals c) familiarization with current research and literature in anaerobic bacteriology.

Course Format:

The course is offered yearly during the fall quarter. Three lectures and 2, 3 hour labs will be held each week. Labs will be held at the Poultry Science Department and include extensive laboratory exercises in the techniques of anaerobic bacteriology. The course will be limited to graduate students having the prescribed prerequisites or by permission of the instructor. Because of the nature of the laboratory exercises and the availability of specialized equipment, the course will be limited to 8 students.

Instructor:

Dr. Robert A. Norton, 231 Animal Sciences, Office Phone: 844-2604.

Class Attendance:

Attendance and participation in lectures is strongly encouraged. Attendance in laboratory sessions will be critical for completion of all exercises and will be used in determining grades. Missed exercises in the laboratory can not be made up.

Grading System:

Four hourly tests will each count for 10% of the grade. The final exam will comprise 20% of the grade. A current literature topic presentation will comprise 20% of the grade and laboratory exercises will comprise 20% of the grade.

The grading scale will be as follows:

90-100% (900-1000 pts) = A

80-89.9% (800-899 pts) = B

70-79.9% (700-799 pts) = C

60-69.9% (600-690 pts) = D

< 60% (<240 pts) = F

References:

Principles and Practices of Clinical Anaerobic Bacteriology, Engelkirk, Engelkirk and Dowell.

Free Radicals in Biology and Medicine, 2nd edition, Halliwell and Gutteridge.

Various supplementary assigned readings will be provided and discussed in class.

Lecture Topics:

Introduction to anaerobiosis. Transport of anaerobic specimens. Collection of samples.

Redox chemistry. Anaerobic specimen processing. Susceptibility testing.

Disease etiology. Anaerobic media preparation.

Endogenous/Exogenous flora. Presumptive identification of anaerobes.

Pathogenesis/virulence factors. Definitive identification of anaerobes.