

**ANFS 435/635**  
**INTRODUCTION TO ANIMAL VIROLOGY**

**INSTRUCTOR:** Dr. Mark S. Parcels,  
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Departments of Animal and Food Sciences and Biological Sciences  
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Office Hrs: following class and by appointment

**COURSE TIME AND LOCATION:** MW, 12:30 – 1:45 PM, 002 Townsend Hall

**REQUIRED TEXT:** No textbook required, this is a primary literature-based course.

**ADDITIONAL INFORMATION:** Selections from *Animal Viruses, Molecular Biology*, T.C. Mettenleiter and F. Sobrino, 2008, Caister Academic Press (selections will be used in course). Additional information will be primary research articles and handouts provided by the instructor.

**UNIVERSITY AND DEPARTMENTAL LEARNING GOALS:**

Aspects of this course directly address all (5) general education and all (4) departmental learning goals.

**University General Education Goals**

1. Read critically, analyze arguments and information, and engage in constructive ideation.
2. Communicate effectively in writing, orally, and through creative expression.
3. Work collaboratively and independently within and across a variety of cultural contexts and a spectrum of differences.
4. Critically evaluate the ethical implications of what they say and do.
5. Reason quantitatively, computationally, and scientifically.

**Departmental Learning Goals**

1. Students will demonstrate oral communication skills important for communicating scientific ideas.
2. Students will demonstrate written communication skills important for communicating scientific ideas.
3. Students will use critical thinking and reasoning, skeptical inquiry and scientific approach to solve problems.

4. Students will demonstrate knowledge of the major core concepts in the animal and food sciences.

**COURSE OBJECTIVES:** This course is an introduction to the practical study of viruses. The main focus is on viruses that are associated with important diseases in animals and humans. The student will be introduced to the classification, structure, molecular biology, pathogenesis and host responses to viral pathogens. After having this course, a student will: (1) Understand key elements of virus isolation and characterization, (2) Understand the association of viral agents with diseases, and (3) Be able to design experiments dissecting the function of virus gene products.

**COURSE FORMAT:** The course will be comprised of lectures, process-oriented guided-inquiry learning (POGIL) exercises, student presentations, and problem-based learning (PBL)-based discussion of current articles. SAKAI-based web material (ANSC435/635 – Animal Virology) accompanies the lecture and a multimedia, group discussion and active participation format will be used for delivering information.

**COURSE REQUIREMENTS:** This course requires active class participation, the submission of one written synthesis paper will be required for undergraduate students (ANFS 435), and two synthesis papers will be required for those taking the course at the graduate level (2 -3 pages/paper). Papers will be succinct synopses of (2) journal articles on a particular subject. Students will be responsible for participation in journal article discussions on primary research articles using a joint problem-based learning (PBL) approach. Specific requirements for these assignments are provided as separate documents.

**GRADING:** Grading will be based on participation in group and PBL-based paper discussions, three hourly exams, one (or two) synthesis research papers, and one panel discussion project. As a final project, students will be assigned a grant proposal to present to the rest of the class in the format of an actual grant review panel.

**ACADEMIC HONESTY:** *The Academic Honesty policy of the University of Delaware will be strictly observed for all work turned in for credit. In particular, no “cutting and pasting” from published (including website) sources. All uses of published materials must be adequately cited.*