

## **SCHOLARLY ETHICS AND INTEGRITY REQUIREMENT**

A proposal submitted by the **DEPARTMENT OF ANIMAL AND POULTRY SCIENCES**

The Department of Animal and Poultry Sciences recognizes the importance of professional ethics and is committed to providing our graduate students with the training and expertise necessary to make good decisions as scholars and members of the scientific community. As mandated by the Virginia Tech Graduate School, the department proposes to continue its efforts in the following required topic areas;

- 1) Plagiarism and other violations of the Honor Code
- 2) Proper use of professional conventions in citation of existing research and scholarship, accurate reporting and ownership of findings, and acknowledgement of contributions to the work
- 3) Ethical standards in teaching, mentoring, and professional activities
- 4) Available avenues for reporting alleged misconduct

This document is a framework for present and future efforts and will evolve continually to remain current and relevant for all graduate students. Critical components include on---line coursework, seminars and workshops. Specifically, the department will address

### **1) PLAGIARISM AND HONOR CODE VIOLATIONS**

- All graduate students will attend the APSC Graduate Student Orientation presented by the APSC Graduate Program Director (GPD) upon arrival during their first semester. The one---day event covers multiple topics unique to the department as well as general information regarding deadlines for plan of study submission, seminars on campus and the Blacksburg community. During the orientation, the GPD is responsible for defining plagiarism and the Virginia Tech Honor Code. The workshop also provides the student with contact information for reporting violations of the Honor Code.
- All graduate students are required to enroll in Collaborative Institutional Training Initiative (CITI) Biomedical Responsible Conduct of Research during their first semester in the graduate program. The on---line course includes learning modules and case studies in plagiarism, data ownership and research misconduct (see Appendix A). A quiz is given at the end of each mini---course and a passing grade of 75% is required. A printed record of completion, including module names and scores, will be supplied to the Graduate Coordinator by end of the first enrolled semester.
- All graduate students (MS and PhD) are required to enroll in APSC 5004 Graduate Seminar a minimum of once during their educational program. The seminar exposes the student to both oral and written communication tasks and evaluates their effectiveness as communicators. Each student writes a mini---review of a topic complete with appropriately formatted references. The mini---review serves as the basis for an oral presentation that also contains correct citation of ideas, concepts,

photography and other web-based materials. A panel of 3 faculty members and one graduate student peer is responsible for the evaluation of the paper and talk. The system effectively addresses the practice of data ownership and citation and effective verbal and written communication skills.

- All graduate students (MS and PhD) are required to enroll in GRAD 5004 Preparing the Future Professoriate. This graduate teaching assistant workshop is offered in the Fall semester by the Virginia Tech Graduate School. The course includes two half-day sessions held immediately prior to Fall semester and two follow-up seminars held during the semester. The P/F course requires student participation in a session entitled *'Encouraging and Enforcing Honesty in the Classroom'* that will reinforce CITI training.

## **2) CITATION OF EXISTING RESEARCH, ACCURATE REPORTING, OWNERSHIP OF FINDINGS AND ACKNOWLEDGEMENT OF CONTRIBUTIONS**

- Learning modules and case studies in the CITI Biomedical Responsible Conduct of Research on-line course covers the topics (Appendix A). Successful completion of the course must be supplied to the Graduate Coordinator by end of the first semester of enrollment.
- The Graduate Seminar (APSC 5004) will be used to reinforce the concepts of professional conventions in citation of existing research and scholarship.
- Concepts will be reinforced by seminars and workshops organized by the Dairy, Animal and Poultry Science Graduate Student Organization (DAPS). The group meets monthly and membership is open to all graduate students in the Departments of Dairy Science and Animal and Poultry Sciences. Oversight and engagement is facilitated by a faculty advisor in the department. The organization currently sponsors events each year covering citation usage and software, grantsmanship and fellowship preparation, oral presentation development, and general professional development topics. The professional development sessions are presented by selected faculty members with expertise in the topic area.

## **3) ETHICAL STANDARDS IN TEACHING, MENTORING, AND PROFESSIONAL ACTIVITIES**

- Successful completion of CITI modules on mentoring, peer review, collaborations and dispute mitigation (Appendix A).
- DAPS workshops and seminars for reinforcement of concepts.
- Discussion of professional behavior and mentor:graduate student expectations and roles will be covered by the Graduate Coordinator during the APSC Graduate Student Orientation.

- Completion of the graduate teaching assistant (GTA) training workshop (GRAD5004, P/F course) within the first semester of enrollment. Modules in the course include Preventing and Handling Harassment and Discrimination in the Classroom, Believing is Seeing: How You Think Influences How Your Students Learn and others related to instruction and mentorship. Documentation of successful completion (P) will be recorded by Graduate Coordinator.

#### **4) AVAILABLE AVENUES FOR REPORTING ALLEGED MISCONDUCT**

- The definition of misconduct, examples and reporting of alleged misconduct is covered by CITI modules. The topic will be reinforced with written and recorded materials supplied by the VT Office of Research.
- Each year, DAPS is charged with hosting a seminar by Dr. Tom Inzana, Virginia Tech Research Integrity Officer. The annual seminar covers research misconduct and reporting practices, conflict of interest, responsible authorship and mentor/trainee responsibilities in research.
- An acceptable substitute for participation in the aforementioned events is attendance of the Ethics Retreat, a one day event held every summer and coordinated by Dr. Vess, Director of Undergraduate Research.

#### **5) OPTIONAL TOPICS PERTINENT TO APSC GRADUATE STUDENTS**

- Appropriate laboratory procedures, notebook maintenance and research documentation will be covered by CITI training
- Animal research protocol development and compliance will be covered by IACUC training
- Confidentiality and conflict of interest definitions and considerations will be covered by CITI training

## **APPENDIX A: CITI Biomedical Responsible Conduct of Research Curriculum**

### **Required Modules**

Introduction to the Responsible Conduct of Research

Research Misconduct

Case Study--- Truth or Consequences

Case Study Plagiarism

Case Study--- No News is Good News

Data Management

Case Study--- Data Management--- Share and Share Alike

Case Study--- Data Management 'Who Owns Research Data?'

Authorship

Responsible Authorship--- The Chair as an Author

Authorship and Publications--- The Grateful Author

Peer Review

What is Responsible Peer Review

Mentoring

Mentoring Case Study: O, What a Tangled Web We Weave

Mentoring Case Study: The Graduate Student Laborer

Mentoring Case Study: Sherry's Secret

Mentoring Case Study: Lisa Bach's Case

Mentoring Case Study: The Business of Mentoring

Conflicts of Interest

CoI Case Study--- The Case of the Promising New Technology

CoI Case Study--- The Case of the Entrepreneurial Clinician

CoI Case Study--- Janet's Suspicions

CoI Case Study--- Cain and Abel

Collaborative Research

When Collaborators Become Competitors

When Collaborators Disagree

Collaborations Between Academics

Marriage Has Its Advantages