

Poultry Science Curriculum Outline *Georgia High School Agriculture Education*

Course Description: This course is designed by the University of Georgia Dept. of Poultry Science as part of the Georgia Agriculture, Food & Natural Resources Pathways as an introductory course into Poultry Science and Avian Biology. The course introduces students to the terminology and knowledge of modern poultry science and the commercial poultry industry, including anatomy and physiology, reproduction, genetics, nutrition, conventional and alternative housing/production methods, broiler-breeders, broilers, commercial egg layers, health, processing, marketing, and more. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities. The purpose of this course is to establish an in-depth understanding and appreciation of Georgia's #1 industry and economic driver among its students.

- 1. FFA & Agriculture Education – 5 days**
 - a. History of FFA & Agriculture Education
 - b. Leadership
 - c. Supervised Agricultural Experiences & Agri-Science Projects

- 2. Introduction to Poultry – 3 days**
 - a. Terminology & History
 - b. Modern Poultry Industry
 - c. Poultry in Georgia

- 3. Integumentary System (External Anatomy) – 3 days**
 - a. Skin
 - b. External Anatomy
 - c. Feathers & Wing Anatomy

- 4. Genetics & Breeds – 5 days**
 - a. Introduction to Genetics
 - b. Breeding Systems
 - c. Common Poultry Breeds & Characteristics
 - d. Heritability & Selection Pressure
 - e. Poultry Breeding Programs
 - f. Production Breeding Selection Characteristics
 - g. Primary Breeder Company Structure

- 5. Internal Anatomy – 5 days**
 - a. Skeletal System
 - b. Muscular System
 - c. Circulatory System
 - d. Digestive System

- 6. Reproductive Physiology & Egg Development – 5 days**
 - a. Male Reproductive System
 - b. Female Reproductive System
 - c. Egg Formation and Production



7. Poultry Evaluation (CDE's) – 12 days

- a. Live Birds
 - i. Four Market Broilers for Placing
 - ii. Four Egg Type Hens for Placing
- b. Shell Eggs
 - i. Ten White or White-Tint Shell Eggs for Interior Quality Grading (Candling)
 - ii. Ten Shell Eggs for Exterior Quality Grading
- c. Ready to Cook Poultry
 - i. Ten Chicken Carcasses and/or Parts for Grading
 - ii. One Class of four Heavy Hen Carcasses for Placing
- d. Further Processed Poultry
 - i. Ten Further-Processed BONELESS Poultry Meat Products for Evaluative Criteria
 - ii. Ten Further-Processed BONE-IN Poultry Meat Products for Evaluative Criteria
 - iii. Ten Chicken Carcass Parts for Identification
- e. Mock Poultry Evaluation Contest (Live or Online)

8. Nutrition – 4 days

- a. Nutritional Needs of Poultry
- b. Nutrient Groups and Dietary Sources & Diet Formulation
- c. Nutrient Disorders

9. Poultry Health – 5 days

- a. Introduction & Terminology
- b. Poultry Illnesses
- c. Vaccinations and Antibiotics
- d. Biosecurity in Commercial and Backyard Poultry

10. Broiler Breeders – 5 days

- a. Terminology & Introduction to Broiler Breeders
- b. Photostimulation & Nesting Behavior
- c. Mating Behavior & Artificial Insemination
- d. Housing

11. Hatchery Operation & Fertilized Eggs – 5 days

- a. Process & Responsibilities
 - i. Egg Handling
- b. Embryology, Hatching & Chick Quality

12. Commercial Broilers – 5 days

- a. Brooding Management
- b. Grow-Out Management
- c. Preparing for Processing
- d. Housing



13. Commercial Layers – 5 days

- a. Chick & Pullet Management
- b. Layer Management
- c. Housing
- d. Commercial Table Egg Processing

14. Farm to Fork – 5 days

- a. Unit Operations of Processing and Purpose of Each
- b. Further Processing
- c. Food Safety & Regulations
- d. Marketing & Labeling of Poultry Products

15. Environmental Management in Poultry Production – 3 days

- a. Wastewater Management
- b. Litter (Fertilizer, etc.)
- c. Mortality (Composting, etc.)

16. Animal Welfare – 3 days

- a. Animal Welfare Overview
- b. Alternative Housing Methods

17. Careers and Further Education Opportunities in Poultry Science – 3 days

- a. University of Georgia – Department of Poultry Science
 - i. Degrees & Statistics
 - ii. Professional & Graduate School Tracks
- b. Career Tracks
 - i. Management Trainee Programs
 - ii. Allied Industries – Business & Marketing
 - iii. Live Animals
 - iv. Processing
 - v. Laboratory – Food Safety, Microbiology, & Health
 - vi. Veterinary Medicine
 - vii. Law

