

ARIZONA DEPARTMENT OF EDUCATION
VOCATIONAL TECHNOLOGICAL EDUCATION CURRICULUM SYSTEM

PROGRAM SCOPE AND DOMAIN

OCTOBER 1995

PROGRAM: Agriscience (Formerly Agricultural Business Management - Animal Science)
CIP: 01.0300 (Formerly 01.0302) Page 1

DESCRIPTION

The Agriscience program is designed to prepare students for employment in various production, sales, and supplier positions related to animals. Student completing this program will possess the technical knowledge and skills associated with animal production and health, marketing, and sales positions. In addition to the required technical skills, students will possess leadership skills, advanced employability skills, critical thinking skills, applied academics, and life management skills.

CERTIFICATION:

Occupations in this area are generally not licensed. Areas related to Animal Science where licensing is required include pesticide application. While this program will introduce the students to related areas, it will not specifically address the requirements for certification as a pesticide applicator.

OCCUPATIONAL CLUSTER(S):

Labor market data is collected and organized in the Arizona Occupational Information System (OIS). The Agriscience program is aligned with the following Occupational Information System (OIS) clusters:

- 0230 Animal, Livestock, & Poultry Production
- 0290 Agricultural Supplies/Products Marketing
- 0240 Fisheries & Aquaculture
- 0210 Agricultural Mechanics & Machinery

Occupations in the above OIS clusters include the following job clusters as reported through the Occupational Employment Statistics (OES) system:

OES CODE	TITLE
21305	Purchasing Agents and Buyers
24502	Biological, Agricultural
49002	Sales Engineers
49005	Sales Representatives, Science
79210	Farm & Ranch Managers Except Horticulture
79250	Farmers, Ranchers Except Horticulture
79410	Farm & Ranch Workers
79411	Marine Life Cultivation Worker
79450	Supervisors of Farms/Ranches
85321	Farm Equipment Mechanics

TYPICAL OCCUPATIONS (DOT):

Information on specific jobs is collected and organized using the Dictionary of Occupational Titles (DOT). Following is a listing of some of the jobs related to this instructional program.

DOT CODE	TITLE
449.674-010	Aquarist
418.384-014	Artificial-Breeding Technician
413.161-010	Beekeeper
049.384-010	Biological Aide
041.381-010	Biology Specimen Technician
411.161-010	Canary Breeder
040.061-022	Dairy Technologist
418.674-010	Dog Groomer
409.683-010	Farm - Machine Operator
624.281-010	Farm - Equipment Mechanic
624.381-014	Farm - Equipment Mechanic II
624.281-014	Farm-Equipment-Mechanic Apprentice
409.686-010	Farmworker, Machine
049.364-010	Feed-Research Aide
040.061-026	Fiber Technologist
162.117-026	Field-Contact Technician
446.684.010	Fish Hatchery Worker

DOT CODE	TITLE (cont.)
040.361-010	Laboratory Technician, Artificial Breeding
559.384-010	Laboratory Assistant, Culture Media
446.687-014	Laborer, Aquatic Life
272.357-014	Sales Representative - Farm and Garden
274.357-018	Sales Representative - Building Equipment
624.361-014	Sprinkler - Irrigation - Equipment Mechanic
049.364-014	Vector Control Assistant

RECOMMENDED INSTRUCTIONAL SEQUENCE:

The following components of the Arizona Model for Vocational Technological Education will provide students with a coherent sequence of instruction for this program.

Level I Grades 7 - 8

Students should complete a minimum of one year of instruction in Technological Exploration and Foundations and/or attain the competencies identified for that experience.

Level II Grades 9 - 10

Students should complete a minimum of one year of instruction in Applied Biological Systems and/or attain the competencies identified for that experience.

Students may choose to complete one year of instruction in Business Management Technology. Business Management Technology is recommended for students who have a special interest in the management of agricultural business management systems.

Students may (at their option) complete experiences in any of the other Level II clusters.

Human Services Technology is recommended for students who have a special interest in agricultural service occupations.

Industrial Technology is recommended for students who have a special interest in technological applications in agriculture.

Information Technology is recommended for students who wish to emphasize computer systems in such areas as accounting, desktop publishing and database management occupations as they relate to agriculture.

Level III Grades 11 - 12

The Agriscience program will be based on the competencies developed and validated by the Curriculum Design Team. In addition to knowledge of agricultural business management in the area of animal science, students should have the opportunity to place special emphasis on more specific livestock species, services, and occupations in which they have an interest. The instructional program will also include a Supervised Experience (SE) component to provide the student with occupational experience.

Level IV Post-Secondary and Advanced Instruction

A Tech-Prep articulated sequence of instruction between Level III (grades 11 and 12) and Level IV (post-secondary) provides the student with the skills associated with a variety of agricultural business management and animal science positions. The typical post-secondary programs include:

Associate Arts, Agriculture

Completion of these post-secondary programs, or a baccalaureate degree, and additional on-the-job experiences may lead to one of the following positions:

DOT CODE	TITLE
040.361-010	Artificial Insemination Laboratory Technician
162.157-010	Broker-And-Market Operator, Grain
162.167-010	Buyer, Grain
446.161-010	Fish Farmer
410.161-014	Fur Farmer
180.167-018	General Manager, Farm
410.161-018	Livestock Rancher

DOT CODE	TITLE (cont.)
180.167.030	Manager, Fish Hatchery
180.167-026	Manager, Dairy Farm
180.167-046	Manager, Poultry Hatchery
185.167-018	Manager, Distributions Warehouse
185.167-030	Manager, Meat Sales and Storage
185.167-038	Manager, Parts
185.167-046	Manager, Retail Store
185.167-054	Manager, Tobacco Warehouse
411.161-018	Poultry Farmer
162.157-038	Purchasing Agent
413.161-014	Reptile Farmer
446.134-010	Supervisor, Fish Hatchery
073.361-010	Veterinary Laboratory Technician

CURRICULUM DESIGN TEAM (1993):

Mr. William L. Deimler, Arizona Department of Education
Mr. David Muehlbauer, Arizona Department of Education
Dr. David E. Cox, The University of Arizona
Dr. James J. Connors, The University of Arizona
Mr. John Mulcahy, Peoria High School
Mr. Matt Lewis, Chandler High School
Mr. Marven Busby, St. David High School
Ms. Paula Wright, The University of Arizona
Ms. Monica Pastor, Maricopa County Farm Bureau
Mr. Bill Winburne, Handwerker - Winburne
Ms. Tanya Hodges, Southwest Transplants

CURRICULUM REVISION TEAM (1995):

Mr. Dennis Fiscus, Arizona Department of Education
Ms. Mary Lewkowitz, Arizona Department of Education
Dr. David E. Cox, The University of Arizona
Dr. James J. Connors, The University of Arizona
Mr. Joe Granio, Highland High School
Mr. Neil Schneider, Highland High School
Mr. Matt Lewis, Chandler High School
Ms. Janet Radmacher, Mountain States Nursery
Ms. Pam Shaw, Environmental Consultants

Academic Teachers:

Ms. Katie Muha, Highland High School
Ms. Ana Colston, Westwood High School
Mr. Al Jenkins, Gilbert High School