

**PROGRAM:** Power, Structural, and Technical Systems

**PROGRAM  
CIP CODE:** 01.0100.60

**DESCRIPTION:** Power, Structural, and Technical Systems - Agricultural Business Management

The Agriculture, Food and Natural Resources, (AFNR) Career Cluster Content Standards provide Arizona agricultural education leaders and educators with a high-quality, rigorous set of standards to guide what students should know and be able to do after completing a program of study in each of the AFNR career pathways.

The Power, Structural and Technical Systems (PST) Career Pathway encompasses the study of agricultural equipment, power systems, alternative fuel sources and precision technology, as well as woodworking, metalworking, welding and project planning for agricultural structures. Students completing a program of study in this pathway will demonstrate competence in the application of principles and techniques for the development, application and management of power, structural and technical systems in AFNR settings. In addition to the required technical skills, students will also develop leadership, advanced employability, critical thinking, applied academic, and life management skills. The program utilizes a delivery system made up of three essential and required components: formal instruction, experiential education through Supervised Agricultural Experiences (SAE), leadership and personal development through the Career and Technical Student Organization, FFA. A model for this delivery system appears in the approved Curriculum Framework booklet.

**SAMPLE CAREERS:** Diesel Mechanic, Machine Operators, Heavy Equipment Maintenance Technicians, Equipment and Parts Managers, Welders, Machinists, GPS Technicians, Remote Sensing Specialist.

### **RECOMMENDED PROGRAM SEQUENCE OF COURSES:**

#### **Career Preparation**

The following describes the recommended Career Preparation courses developed from industry-validated skills for initial employment or continued related education. All the state-designated Agricultural Business Management - Agriscience standards are addressed in this instructional sequence. Power, Structural and Technical Systems has 4 recommended courses in the program sequence. However, 3 Carnegie units of course work are required to complete the program. Power, Structural and Technical Systems programs must offer the .60 Power, Structural and Technical Systems course and a **minimum** of 2 additional courses i.e. .10 or .12 or .14

01.0100.10 **Agricultural Business Management - Introduction to Applied Biological Systems:** Students must attain these Standards in a coherent sequence of courses 01.0100.10 and/or 01.0100.12. Science credit for secondary graduation can be available, per Arizona State Board of Education guidelines and local governing board approval.

**-and-**

01.0100.12 **Agricultural Business Management - Applied Biological Systems:** Students must attain these Standards in a coherent sequence of courses 01.0100.10 and/or 01.0100.12. Science credit for secondary graduation can be available, per Arizona State Board of Education guidelines and local governing board approval.

**-and-**

01.0100.14 **Agricultural Business Management - Agriscience:** These Standards are designed to deliver the economics standards associated with the Agriculture, Food and Natural Resources career cluster. It is recommended that these standards be covered in course sequences during the 10<sup>th</sup> through 12<sup>th</sup> grades.

**-and-**

01.0100.60 **Power, Structural and Technical Systems:** Power, Structures, Controls, Geospatial Technology, Computer Systems, Electronics, Hydraulics, Pneumatics, etc.

**And program may elect to add:**

01.0100.75 **Agricultural Business Management - Agriscience - Internship:** This course provides students an opportunity to apply previously developed knowledge and skill in Agricultural Business Management - Agriscience into a structured work experience within the same field of study. This work experience doesn't necessarily require classroom instruction and may be paid or unpaid. This is part of the student's SAE component.

**-or-**

01.0100.80 **Agricultural Business Management - Agriscience - Cooperative Education:** This course utilizes a cooperative education methodology to combine school-based and supervised work-based learning experiences directly related to the standards identified for the Agricultural Business Management - Agriscience program.

**TEACHER CERTIFICATION REQUIREMENTS FOR THE  
POWER, STRUCTURAL, AND TECHNICAL SYSTEMS - AGRICULTURAL  
BUSINESS MANAGEMENT PROGRAM**

CAREER PREPARATION: The instructor must be CTE certified according to the following table

**Power, Structural, and  
Technical Systems**

CERTIFICATES

Types: PCTA, SCTA

**Note:**

- **Agricultural Business Management - Agriscience, 01.0100.70** may be a part of the sequence and the teacher must hold a Cooperative Education Endorsement (CEN).
- Teacher/Coordinator **01.0100.75** is not required to have a Cooperative Education Endorsement (CEN).
- Teacher/Coordinator **01.0100.80** is required to have a Cooperative Education Endorsement (CEN).

**TEACHER CERTIFICATION REQUIREMENTS FOR THE  
POWER, STRUCTURAL, AND TECHNICAL SYSTEMS - AGRICULTURAL  
BUSINESS MANAGEMENT PROGRAM**

Certificate Types

**PCTA**      Provisional Career and Technical Education Agriculture

**SCTA**      Standard Career and Technical Education Agriculture