

## Agricultural Science Undergraduate Degree Certification

### **Accredited Undergraduate Degree Program**

#### **Pre-cursors:**

- Academic preparation in agriculture must comprise at least 67.5 quarter unit hours.
- Academic preparation must include a basic set of courses which develop a foundation across the domains of agriculture (agricultural mechanics, agriculture business management, animal science, horticulture, natural resources, and plant & soil sciences) which fulfill Standards 2 through 7 below. These courses should comprise 70 to 80 percent of the program.
- Each program submission shall include a listing and description of the courses that constitute this set of courses. Institutions shall have flexibility to determine whether their programs offer a specific course for each subject area or set of courses offering coverage across multiple subject areas.
- Programs of academic preparation must include courses that provide specialization to supplement the basic set. These courses will comprise 20 to 30 percent of the program. Institutions shall have flexibility to define their program in terms of specifically required coursework or in terms of electives within each area.

#### **Undergraduate Degree Program Standards:**

##### **Standard 1: Program Philosophy and Purpose**

The subject matter preparation program in agriculture is based on an explicit statement of program philosophy that expresses its purpose, design, and desired outcomes; and defines the institution's concept of a well-prepared teacher of agriculture. The program philosophy, design, and desired outcomes are appropriate for preparing students to teach agriculture in California schools.

##### **Standard 2: Animal Science**

The program requires basic preparation in animal science that develops knowledge, skill, and the ability to integrate and apply practical applications in the areas of animal science and production.

##### **Standard 3: Plant Science and Soil Science**

The program requires basic preparation that develops knowledge, skill, and the ability to integrate and apply applications in the areas of plant science and soil science.

##### **Standard 4: Ornamental Horticulture**

The program requires basic preparation that develops knowledge, skill, and the ability to integrate and apply applications in the area of ornamental horticulture.

**Standard 5: Agricultural Business Management**

The program requires preparation that develops knowledge, skill, and the ability to integrate and apply basic economic principles, record keeping practices, planning systems, management concepts, and marketing tools as they relate to the agriculture industry.

**Standard 6: Natural Resources and Forestry**

The program provides a broad range of experiences designed to enhance each candidate's awareness of the environment, recognizing the renewable and non-renewable resources, energy and mineral resources and the responsibilities that agriculture has in managing these resources.

**Standard 7: Agricultural Mechanics**

The program requires basic preparation that develops knowledge, skill, and the ability to integrate and apply practical applications in the area of agricultural construction, equipment maintenance, and safe operations of agricultural equipment.

**Standard 8: Specialization in Agriculture**

The program in agriculture includes specialized study in animal science, plant science/soil science, ornamental horticulture, agricultural business management, natural resources and forestry, or agricultural mechanics.

**Standard 9: Agriculture Education as a Profession**

The program includes instruction in the philosophy and history of agriculture education, the status of agriculture in contemporary society, and the role of the educator in the school, community, and industry.

**Standard 10: Integration of Concepts**

The program provides opportunities for integrative study of the major themes and concepts of the program areas within agriculture, and the interrelationships that exist between agriculture areas and with other subject areas.

**Standard 11: Field Experiences**

Each program involves students in field experiences in school agriculture classes.

**Standard 12: Occupational Experience**

The program requires a minimum of 3000 hours of occupational experiences (with at least 500 of those hours post high school) in a technical agricultural career area, which develop the ability to integrate and apply attitudes, skills, and practical knowledge associated with an agricultural entrepreneurial or workplace setting to the high school agricultural education program.

**Standard 13: Agriculture Technology**

The program provides opportunities for the student to examine and use all forms of technology that are appropriate in agriculture.

**Standard 14: Diversity and Equity in the Program**

Each student in the agriculture preparation program acquires knowledge, understanding and appreciation of the perspectives and contributions of both men and women and diverse cultural and ethnic groups to agriculture. The program promotes educational equity by utilizing instructional, advisement, and curricular practices that offer equal access to program content and career options for all students.

**Standard 15: Agriculture Teaching and Assessment**

The program employs multiple strategies, activities, and materials that are appropriate for effective teaching and assessing development and learning in agriculture; and provides a foundation for subsequent studies of teaching and assessment methods.

**Standard 16: Safety Procedures**

The program instructs students in proper safety procedures prior to laboratory and field experiences and includes instruction in emergency procedures and the proper use, storage, handling, and disposal of hazardous materials and equipment.

**Standard 17: Coordination of the Program**

Each agriculture subject matter preparation program is coordinated effectively by one or more persons who are responsible for program planning, implementation, and review.

**Standard 18: Student Advisement and Support**

A comprehensive and effective system of student advisement and support provides appropriate and timely program information and academic assistance to students and potential students, and gives attention to transfer students and members of groups that traditionally have been underrepresented among teachers of agriculture.

**Standard 19: Assessment of Subject Matter Competence**

The program uses multiple measures to assess the subject matter competence of each student formatively and summatively in relation to Standards 1 through 10. The scope and content of each student's assessment is congruent with the studies the student has completed in the program.

**Standard 20: Program Review and Development**

Each subject matter program has a comprehensive, ongoing system of review and development that involves faculty, students, and appropriate public school

personnel, including agriculture teachers and agriculture industry representatives, which leads to continuing improvements in the program.