PLANT SCIENCE, CERTIFICATE OF ACHIEVEMENT

The Certificate of Achievement in Plant Science is designed to prepare students to develop the core skills necessary to meet the needs and challenges of modern agricultural production. Students integrate concepts from plant science, soil science, and agronomy, and apply them to agricultural production operations. A student completing the Certificate of Achievement in Plant Science may apply the credits completed towards obtaining either an Associate in Science in Agriculture Plant Science for Transfer or an Associate in Science in Agriculture Business for Transfer degree, which both transfer to California State Universities and count towards the completion of a Bachelor's Degree in Plant Science, Agriculture Studies, Agricultural and Environmental Plant Science, Agricultural Science, Agricultural Education, Agribusiness, or Agribusiness and Food Industry Management.

Students who complete this certificate will be prepared for careers in agronomy, crop science, soil science, agricultural biology, entomology, plant biotechnology, pest control, postharvest physiology, and environmental conservation of water, farmlands, open space, and landscaped areas.

Course ID	Title	Units/ Hours
Required Core Courses (9 units):		
AG V04	Introduction to Soil Science	3
AG V06	Introduction to Plant Science (with Laboratory)	3
AG V30	Plant Propagation and Production	3
Required Additional Courses:		
Select a minimum of twelve (12) units from the following courses:		
AG V01	Agriculture and Society: Agriculture as the Foundation for Modern Civilization	3
AG V10	Introduction to Agriculture Business	3
AG V12	Agriculture Economics	3
AG V13	Agricultural and Industrial Computer Applications	3
AG V21	Introduction to Integrated Pest Management (IPM)	3
AG V22	Introduction to Plant Pathology: Insects and Diseases of Plants	3
AG V32	Produce Safety Rule (PSR) Training	1
AG V42	Plant Identification and Culture: Spring Specimens	3
AG V43	Plant Identification and Culture: Fall Specimens	3
AG V96	Agriculture Internship II	1-4
MATH V44	Elementary Statistics	4

Total Required Major Units		**21-23**

One-Year Plan:

Year 1		
Fall Semester		**Units/Hours**
AG V06	Introduction to Plant Science (with Laboratory)	3
Elective *		3-4
Elective *		3
Elective *		3
*Students desiring to take AG V01, AG V10, AG V12, AG V13, AG V21, AG V32, or AG V43 should do so during the fall semester.		
	Units/Hours	**12-13**
Spring Semester		
AG V30	Plant Propagation and Production	3
AG V04	Introduction to Soil Science	3
Elective **		3-4
**Students desiring to take AG V01, AG V22, AG V42 or AG V96 should do so during the spring semester.		
	Units/Hours	**9-10**
	Total Units/Hours	**21-23**

Two-Year Plan:

Year 1		
Fall Semester		**Units/Hours**
AG V06	Introduction to Plant Science (with Laboratory)	3
Elective *		3-4
*Students desiring to take AG V10, AG V12, AG V13, AG V21, AG V32, or AG V43 should do so during the fall semester.		
	Units/Hours	**6-7**
Spring Semester		
AG V30	Plant Propagation and Production	3
AG V04	Introduction to Soil Science	3
	Units/Hours	**6**
Year 2		
Fall Semester		
Elective *		3
Elective *		3
*Students desiring to take AG V10, AG V12, AG V13, AG V21, AG V32, or AG V43 should do so during the fall semester.		
	Units/Hours	**6**
Spring Semester		
Elective **		3-4
**Students desiring to take AG V22, AG V42 or AG V96 should do so during the spring semester.		
	Units/Hours	**3-4**
	Total Units/Hours	**21-23**

Upon successful completion of this program, students will be able to:

- Explain and evaluate relevant concepts of plant physiology, anatomy, nutrition, reproduction, and pest control to solve plant production problems under field, greenhouse, or landscape conditions.
- Identify and utilize pertinent concepts of soil physical, chemical, and biological properties and their interactions with plants to solve plant production problems under field, greenhouse, or landscape conditions.
- Apply concepts of plant propagation, utilizing techniques such as grafting, budding, layering, and micro-propagation, to effectively reproduce plants from seeds, stems, leaves, roots, and/or cuttings to produce grafted plants.