

KANSAS PLANT SYSTEMS SKILLS & COMPETENCIES CERTIFICATE

The Kansas Plant Systems Skills & Competencies Certificate will document skills and competencies gained by student participation in agriculture education through the Plant Systems Pathway. The program is an opportunity to quantify and qualify skills learned through completion of all three segments of the agriculture education model with a focus on plant systems.

The United States Department of Agriculture reported over 59,000 annual job openings are expected in food, agriculture, renewable natural resources and the environment between 2020 and 2025. Agriculture is responsible for 11 percent of our nation's employment and more than 5 percent of our nation's gross national product. However, each year more than 20,000 jobs in agriculture go unfilled because of a lack of qualified graduates.

The Kansas Department of Agriculture (KDA) is pleased to sponsor this certificate program for Kansas FFA members. The certificate is listed as a qualifying certificate for Governor Brownback's Career Technical Education (CTE) Initiative.

In order to be eligible for the Kansas Plant Systems Skills & Competencies Certificate, the following requirements must be met. **Please refer to the Plant Systems Qualifying Competencies and Examples of Pathway Skills support documents for eligible competencies and examples of Plant Systems Pathway skills.**

- Must have completed three high school agriculture education courses, two of which must be from the following list:
 - 18058 – Plant & Soil Science
 - 18052 – Horticulture
 - 18071 – Applications in Horticulture
 - 18057 – Floriculture & Greenhouse Management
 - 18081 – Crop & Range Management
- Must have been an FFA member for at least twenty-four months at time of application
- Complete either of the following Supervised Agricultural Experience (SAE) documentation:
 - Submitted district level Plant Systems Pathway specific proficiency award application
 - Earned State FFA Degree supported by a Plant Systems Pathway specific SAE
- Cumulative GPA of 2.5 or higher in all classes, not just agriculture education courses
- Participate in one FFA leadership event or Career Development Event (CDE) and one technical FFA Plant Systems Pathway specific CDE, above the chapter level, listed on the Plant Systems Qualifying Competencies support document
- Satisfactorily complete the cPass Plant Systems Assessment. Level to be considered satisfactory will be determined by the KSDE Education Program Consultant, in consultation with KDA
- As part of the application, students will also be asked to complete a brief essay describing at least five, but up to ten, Plant Systems Pathway specific skills they have gained through their participation in above activities as reviewed by their advisor

I hereby confirm that I have honestly and accurately met the certificate requirements listed above and are reflected in this application for the Kansas Plant Systems Skills & Competencies Certificate.

Name (Printed)

Name (Signature)

Date

Home Address: _____

The Kansas Department of Agriculture is the state agency devoted to the total support of agriculture. The department works for the entire Kansas agriculture sector, including farmers, ranchers, food establishments and agribusinesses. The department is dedicated to providing support and assistance to make Kansas businesses successful and encouraging more farms, ranches and other agriculture business to expand in or relocate to Kansas.

Within this role, the Kansas Department of Agriculture also fulfills its statutory responsibility of regulating business functions in accordance with state law. The department works to ensure businesses know what laws affect them and how they can ensure they are in compliance with those laws. In this process, the department aims to minimize excessive rules and regulation.

APPLICATION CHECKLIST

Official transcript

One of the following two must be completed and attached to application:

District proficiency application signature page, signed by the chapter advisor

OR

State FFA Degree application signature page, signed by chapter advisor

All sections of the application must be completed

Agriculture education courses

FFA membership

SAE documentation

GPA verification

FFA leadership event/CDE and technical FFA plant systems CDE participation above the chapter level

cPass Plant Systems Assessment passage and verification

Skills identified in a brief essay referencing Plant Systems Pathway specific skills

Signatures *{both cover page and signatures documentation page}*

SUBMITTING THE APPLICATION

The Kansas Department of Agriculture will receive applications anytime during the academic year. All applications should be submitted upon completion, but **must be postmarked by May 1**. For an electronic application, please visit agriculture.ks.gov/ageducation – under the Kansas Agriculture Skills & Competencies Certificates list.

Applications may **only** be mailed to the following address:

Kansas Department of Agriculture
c/o Education & Event Coordinator
1320 Research Park Drive
Manhattan, KS 66502

In order for an application to be considered eligible, all sections of the application form must be completed.
No handwritten applications will be accepted.

KANSAS PLANT SYSTEMS SKILLS & COMPETENCIES CERTIFICATE

Please complete the following sections in full prior to submitting your application. Please contact the Kansas Department of Agriculture Education & Events Coordinator at robin.blume@kda.ks.gov or at (785) 564-6756 with any questions.

AGRICULTURE EDUCATION COURSES

Please list the agriculture education courses you have completed. In order to receive the certificate, you must have completed at least three courses, two of which are from the following list:

18058 – Plant & Soil Science, 18052 – Horticulture, 18071 – Applications in Horticulture,
18057 – Floriculture & Greenhouse Management, 18081 – Crop & Range Management

Please list any agriculture education courses you are currently enrolled in and anticipate completing prior to graduation.

FFA MEMBERSHIP

Please list the academic years in which you were an active FFA member. A minimum of twenty-four months of active membership is required.

Year One:

Year Two:

Year Three:

Year Four:

SUPERVISED AGRICULTURAL EXPERIENCE (SAE) DOCUMENTATION

In order to receive the certificate, your SAE must meet one of the following requirements:

- 1) Submitted district Plant Systems Pathway specific proficiency award application
- 2) Earned State FFA Degree supported by a Plant Systems Pathway specific SAE

District Proficiency Option

Attach to this application packet a copy of the District Proficiency Award cover page, signed by your FFA advisor. The submission of this application to the district level will be verified by KDA on behalf of the Kansas FFA Executive Secretary who will obtain a list of students who have submitted a District Proficiency Award application following district selections each spring. To fulfill this requirement, the proficiency must be listed under *Proficiency Areas* on the Plant Systems Qualifying Competencies support document.

State Degree Option

Attach to this application packet a copy of the State FFA Degree cover page, signed by your FFA Advisor. The earning of your State FFA Degree will be verified by KDA on behalf of the Kansas FFA Executive Secretary who will submit a list of students who have earned their state degree following State Convention each spring. To fulfill this requirement, the SAE must be listed under *Proficiency Areas* on the Plant Systems Qualifying Competencies support document.

Please indicate which requirement you have completed:

- Submitted district proficiency award application
- Earned State FFA Degree

In the space below, give a brief overview of your Plant Systems Pathway specific Supervised Agricultural Experience:

GPA DOCUMENTATION

In addition to noting your overall high school GPA in the space below, attach a copy of your transcript to this application packet. A cumulative GPA of 2.5 or higher, in all courses, is required to obtain the certificate.

GPA {all classes, not just agriculture education courses}:

Weighed GPA {if applicable}:

CAREER DEVELOPMENT EVENT (CDE) DOCUMENTATION

Please show documentation of one FFA leadership event/CDE and one technical FFA Plant Systems Pathway specific CDE above the chapter level and organized by FFA, in which you participated. The same CDE cannot be used for both requirements. Listing of acceptable CDEs and events is located on the Plant Systems Qualifying Competencies support document.

FFA Leadership Event/CDE above the Chapter Level

Event/

CDE:

Date:

Location:

FFA Technical Plant Systems Pathway Specific CDE above the Chapter Level

CDE:

Date:

Location:

CPASS PLANT SYSTEMS ASSESSMENT

The Kansas State Department of Education (KSDE) program consultant, in consultation with KDA, will verify that the cPass Plant Systems Assessment has been completed satisfactorily. No further documentation is necessary.

SKILLS & COMPETENCIES GAINED

In a brief essay, describe 5-10 major skills, competencies and knowledge (e.g. marketing, safety, personal skills development) that best describe what you gained technically and personally from your agriculture education curriculum. Skills should be selected from the competency profiles for technical courses specific to the Plant Systems Pathway. Please refer to the Plant Systems Examples of Pathway Skills support document for examples of pathway skills.

SIGNATURE DOCUMENTATION

Agriculture Education Instructor and FFA Advisor

As the agriculture education instructor and FFA advisor to this Kansas Plant Systems Skills & Competencies certificate applicant, I hereby verify that this student has completed a minimum of three courses of agriculture education work, been an active FFA member for a minimum of two years, participated in the FFA events/CDE's documented above and taken the cPass Plant Systems Assessment test.

Name (Printed)

Name (Signature)

Date

School Administrator

As the school administrator to this Kansas Plant Systems Skills & Competencies certificate applicant, I hereby verify that all information provided in this certificate application is accurate.

Name (Printed)

Name (Signature)

Date

Kansas Plant Systems Skills & Competencies Certificate – Support Document

Examples of Pathway Skills

This list is not exhaustive

Below are **examples** of the **application-level skills** applicants describe when completing the Skills & Competencies Gained portion of the certificate application.

Plant Systems Pathway

- Identify career opportunities in horticulture and the green industry career pathway
- Classify plants according to the hierarchical classification system, life cycles, plant use and as monocotyledons or dicotyledons
- Apply the knowledge of seed and fruit structures to plant culture and use
- Evaluate plant responses to varied light color, intensity, and duration
- Formulate and prepare growing media for specific plants or crops
- Apply fundamentals of Mendelian genetics
- Conduct tests associated with seed germination rates, viability and vigor
- Employ pest management strategies to manage pest populations, assess the effectiveness of the plan and adjust the plan as needed
- Estimate forage productivity based on precipitation effectiveness and frequency
- Analyze various pasture/ranges and determine range condition
- Construct grazing intensity and timing recommendations based on information provided
- Design, implement and evaluate a plan to maintain optimal conditions for plant growth
- Evaluate techniques for grading, handling and packaging plants and plant products
- Evaluate environmental and consumer concerns regarding pest management strategies
- Calculate operation costs and greenhouse structure costs
- Propagate plants using sexually and asexually methods
- Demonstrate bedding plant production
- Describe control methods, sanitation, chemical formulations, and equipment used to control pests in the greenhouse
- Identify basic principles of floral arranging and floral design
- Construct a one sided arrangement
- Demonstrate techniques for the processing of cut plant materials

A complete lists of Plant Systems Pathway Knowledge and Skills can be found at ksde.org/default.aspx?tabid=449 under the title “2015-2016 Plant Systems Pathway Design Sheet”.

Please refer to this document when completing the Skills & Competencies Gained portion of the certificate application.