

AGRICULTURAL TECHNOLOGY AND MECHANICAL SYSTEMS CDE

The Eastern States Exposition FFA Agricultural Technology and Mechanical Systems Career Development Event is designed to recognize those students who have developed the competencies necessary for success in the changing workplace. To meet the expectations of the workplace, individuals must not only develop a high degree of knowledge and skill, they must also develop the ability to solve difficult problems. This career development event will have a balance between a problem-solving focus performed by students working together as a team and individual knowledge and problem-solving skill performance.

FORMAT

1. The CDE will follow a modified format taken from the National FFA Agricultural Technology and Mechanical Systems Career Development Event utilizing the same “theme” as the National. A five year rotational schedule will exist as follows:

<u>Event Theme</u>	<u>Year</u>
Processing Systems	2018
Plant Production Systems	2019
Integrated Pest Management	2020

2. The CDE will be developed from material taken from same five subject matter areas as the National and includes: **Machinery & Equipment Systems, Electrical Systems, Energy Systems, Structural Systems, and Environmental/Natural Resource Systems**. Please see the National Bulletin. It is suggested that Agricultural Mechanics instructors check the National FFA Agricultural Technology and Mechanical Systems Career Development Event Update web site <http://web.missouri.edu/~pavt0689/natcon.html> for additional information concerning the National event.
3. Each contestant will participate in one or more, individual, problem solving/skill development activities and a 50 question multiple-choice examination.
4. Each team will be given an integrated problem solving activity to work on together or delegate parts to each team member to complete. The final product may be an oral or written presentation of their results. The team must be prepared to answer questions by the contest official and justify their answers.
5. The CDE will be conducted from 7:30 a.m. to approximately 12:00 noon, depending upon the number of teams competing and will follow a rotational format that will accommodate 9 to 12 teams.
6. The three co-superintendents will each supervise one part of the event and therefore, be able to evaluate that area consistently.

RULES AND REGULATIONS

1. There will be three or four contestants per state certified by the State Supervisor. Less than three contestants will not be eligible for a team score or placing. (See items ten and eleven for scoring methodology.)
2. Each contestant will work alone for the written examination and the problem solving /skill activities unless otherwise indicated.
3. Each team will work together to solve the integrated problem (team activity).
4. **Industrial Eye Protection:** No contestant will be allowed to participate in the performance skills events of the CDE without “eye protection devices” (spectacles or goggles) that meet the standards of the American National Standard Practice for Occupational and Education Eye and Face Protection and any subsequent revisions. Industrial quality eye protection lenses and frames conforming to the new standard will be marked with either the manufacturer's logo and/or Z87 logo.
5. Each contestant shall furnish and wear, shop coat or shop work clothes as the officially approved uniform for the contest events. Clothing must be in good repair and fit properly.
6. Cell phones, pagers or other communications equipment may not be used during the event.
7. Any contestant may be disqualified from an area if the judge of that station feels the student is proceeding through the exercise in an unsafe manner.
8. Each contestant will be assigned to a group and starting station. Indication will be provided as to when and where to rotate.
9. Time allotted to each station will be determined by the event superintendents.
10. Individual scores will be the sum of the contestant’s written examination and the problem solving /skill activities plus the score of the team activity. Each of the members of a team will be assigned the same score for the team activity.
11. Team scores will be the score for the team activity (100 points max.) plus the average of the top three team member’s individual activity scores (300 points max.). The total possible team score is 400 points.
12. **EACH CONTESTANT WILL NEED TO BRING SAFETY GLASSES, CLIPBOARDS, PENCILS, AND CALCULATORS.**

2018 Theme – Processing Systems

General written exam (100 pts.) – A 50 question multiple-choice exam that covers a variety of material related to the theme. Co-superintendent: Mark Burdick

Electrical Systems: Group Activity (100 pts.) – Modern processing equipment relies heavily on electrical and electronic systems. Technicians servicing this equipment need to be familiar with the fundamentals of electricity including Ohms Law, schematic reading and interpretation, technical manual test procedures and use of electrical test equipment. Use of electronic service information systems will be required. Co-superintendent: Doug Hammond

Machinery & Equipment Systems: Problem solving (100 pts. total) – This area will deal with small engines that are used on a vast array of equipment. A problem set will allow contestants to demonstrate their understanding of how engines work as well as preventive maintenance and troubleshooting. The skill portion will deal with engine failure analysis. Co-superintendent: Nick Testa

Machinery & Equipment Systems: Problem solving/Skill (100 pts. total) – Subject: Forest products processing. Contestants should be able to solve problems with forest production machinery including chainsaws, sawmills, grapple cranes or skidders; as well as identify parts of these machines. The skill portion will deal with chainsaw troubleshooting, including sharpening of chains and analyzing and detecting problems with the saw. Co-superintendent: Mark Burdick