District Agricultural Technology and Mechanization Event

I am writing to give the guidelines on the 2023 District Ag Technology and Mechanics Event. The Electrical Construction and Control, Heating Ventilation and Air Conditioning, and Agriculture Departments will again conduct the event this year at Northeast Community College. The Northeast Community College Faculty that is conducting the contest has experience working with the Ag Technology and Mechanics contest/event that first began in 1983. We have participated in many changes in the event. The Northeast Community College faculty team also understands the challenges of hosting a State event. The Northeast Community College faculty has traveled to Lincoln and has hosted the Nebraska Ag Technology and Mechanics contest/event.

We hope that the District event will not only be educational but also prepare your teams for the State competition. We will host the event in a state-of-the-art Technology facility. The Northeast Community College Faculty hopes that the Technology facility can be used to allow your students a greater experience in a state-of-the-art facility that represents careers in technology in Nebraska's industry today.

Time is a factor that needs to be considered as the District event is planned. Due to time considerations, we will not be able to conduct the event exactly the same way the Nebraska State event is completed. We will have similar educational experiences for your students. Be aware that what one student may participate at the District level all students may participate at the State level. Please have your students arrive to the Agricultural Technology and Mechanization Systems contest once the orientation is completed in the gym. If you have concerns, please call Mike Lechner at 402-844-7182.

Because of the facility and the college students at Northeast Community College your students will be evaluated and have individual scores in the team competition. During the team competition each individual high school student will have a college student evaluate them independently as the students complete the team activity. No college student will evaluate a student from their hometown. We believe if it is truly a career-based contest every high school student should be involved rather than one student that is working and three observing. This is nothing new as we have conducted this form of evaluation for over twenty years.

You may want to examine https://alec.unl.edu/agedcde/ag-technology-mechanics this page examines the Nebraska Ag Technology and Mechanics CDE

You may also want to examine
https://www.ffa.org/participate/cdes/agricultural-technology/
This page examines the National FFA Agricultural Technology Mechanical Systems Career Development Event.

1. The theme for 2023 District contest is “Ag Processing Systems”

2. At the District contest each team will have 4 team members with a specialty area:

   Member A: 1 member in Structural Systems
   Students will be expected to examine materials, procedures and appropriate equipment, and safety concerns in structures associated with Ag Processing Systems. The student will arc weld and be given two pieces of metal and one arc welding rod. The Structural Systems student will also have a written exam.

   Member B: 1 member in Environment and Natural Resource Science and Hydraulic Pneumatic
   Students will be expected to understand the proper use of water quality, material compatibility, soil and water conservation, and discharge/handling from Processing Systems. The student will identify hydraulic/pneumatic tools and parts. The Environment and Natural Resource Science/Hydraulic student will also have a written exam.

   Member C: One member in Energy Systems. This activity will involve an electrical wiring activity and may include the following. Instillation and/or connection of electrical outlets, a GFCI, electrical switches, relays, limit switch, pressure switch, lights, and sensors. There will be an individual skill area and a written test. Each person competing in the Energy Systems area should bring the following tools for the energy section which would include a wire stripper, screwdriver (Philips and straight), and volt meter.

   Member D: 1 member in Machinery/Equipment Systems
   Students will be expected to understand the principles of the operation of machines and equipment used with Processing Systems. The students will also identify basic parts from an ice cream machine. The Machine and Equipment systems student will also have a written exam.

Team activity

All four of the members will complete in a team activity. This area will involve the application of electrical controls. The team activity will include a pump that could be used for chemicals and others Agriculture Processing Systems.

The District contest will be as stated above.

3. The contest at NECC will be divided into three parts.
   Area I
   1. A written test for each of the four specialty areas. (one test per team member according to their specialty area) **worth 50 points** (20 min.)

Area II

1. Individual skills/problem solving each individual will work by themselves on activities. (20 min) **worth 75 points**

Area III

1. A (team type problem (s) with an electrical pump where they work together. This area will involve the application of electrical controls.
   (about a 20 minute activity). Worth 300 points, **75 points possible for each team member**.

Material needed by each team member:

Safety: Each individual must:

A. Follow recommended practices and work habits appropriate for assigned activities.

B. Be responsible for all personal safety equipment, including:

1. Industrial Quality Eye Protection which meets standards of the American National Standard Practice for Occupational and Educational Eye and Face Protection Z87.1-1979 (orZ87.1-1968)
2. Wear appropriate clothing: examples: Clothing each individual shall furnish and wear coveralls, shop coat or appropriate clothing for this event.

C. Each individual will need to provide the following for their event.

1. **Safety glasses (one pair for each team member)**
2. Calculator (preferably a scientific calculator)
3. Wire strippers
4. Flat screwdriver
5. Phillips screwdriver
6. Needle nose pliers
7. Electrical meter
8. #2 pencils
9. Arc Welding Helmet, Welding gloves, and pliers (Structural Systems student)

Contest Policies: Students must conduct themselves in an appropriate manner no talking allowed (between team members or between members of different teams) Team members will be allowed to talk only during the team activity portion of the contest. Talkers may be warned, or they may automatically receive a `zero` grade for that portion of the contest.

Summary: We will try our best to provide a good learning experience for all contestants. Thank you.

Contact (s):

Energy/Electrical Systems and Team Event: Brian Rastede 402-844-7207

and

Structural Systems, Machine and Equipment Systems, Environment and Natural Resource Systems: Mike Lechner 402-844-7182

We realize that a school may have students competing in more than one contest. If a school has students in the Agricultural Mechanization Technology contest and an additional contest that is scheduled from 9:00 a.m. to 11:00 a.m. please call Mike Lechner at 402-844-7182. Regardless if a high school has team members in an additional contest all other students that are not competing in additional contests scheduled from 9:00 a.m. to 11:00 a.m. are expected to arrive at the Northeast Community College Technology building at 9:00 a.m. for the Agricultural Mechanization Technology contest. If a student does not arrive before the scheduled contest is completed that student will receive a zero score as an individual.