AGRICULTURAL MECHANICS CONTEST OFFICIAL RULES

Friday April 15, 12:00 pm
Hill Hall 108

CONTACT PERSON:
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Each team will consist of 4 students who are enrolled as full time students in a two year or four year agricultural degree or certificate granting program. Students who have competed in previous NACTA ag mechanics contests are not eligible. All contestants are eligible for individual awards. Teams may participate with less members, however, total score of a designated team is still used to determine team awards.

CONTEST AREAS

The contest will consist of four areas with seven total components worth 100 points each 700 points total.

1. **KNOWLEDGE EXAM**
    - **A. Areas to be tested**
        1. Tractor power and small engines
        2. Planting, tilling, spraying and harvesting equipment
        3. Welding – gas and arc
        4. Electrical circuits, controls and motors
        5. Building construction and concrete
        6. Surveying and Soil and Water Engineering

(The following areas may include component identification, problem solving, trouble shooting, adjustment, repair and/ or construction skills)

2. **AGRICULTURAL POWER AND MACHINERY**
    - **A. Tractor power and small engines**
        1. Electrical (DC)
        2. Engines
        3. Power trains
        4. Air conditioning
        5. Ignition
        6. Electronic controls
        7. Fuel systems
    - **B. Planting, tillage, spaying, and harvesting equipment**
        1. Row-crop planters
        2. Grain drills
        3. Sprayers
        4. Combines
        5. Tillage equipment

3. **AGRICULTURAL STRUCTURES AND ELECTRIFICATION**

A. AC Electrical Circuits

1. Electrical Circuits
2. Electrical Motors
3. Electrical Controls

B. Building Construction

1. Wood construction
2. Concrete
3. Plumbing

4. **AGRICULTURAL CONSTRUCTION AND SOIL & WATER CONSERVATION**

A. Welding

1. Arc welding
2. Oxy/Acet Welding and cutting

B. Soil and water Engineering and Surveying

1. Determining Slopes and Elevations
2. Measuring distances and angles