

2023

NACTA JUDGING CONFERENCE



AG MECHANICS CONTEST OFFICIAL RULES

Friday, April 14, 2023

7:45 a.m. - Instructions

8:00 a.m. - 12:00 Noon - Contest

MJC East Campus Ag Building

Shops 101 and 108

Contest Director:

Ryan Patterson

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2023 NACTA Agricultural Mechanics Competition

Hosted by Modesto Junior College School of Agriculture

Contest Rules:

1. All contestants are eligible for individual awards.
2. Teams will consist of four members enrolled as full-time students in a two-year or four-year agricultural degree or certificate granting program. One team is permitted per institution. Team scores are determined by combining the four individual student scores of the students competing. Schools may bring up to 4 additional students to compete for individual awards
3. Each student must provide individual Safety Glasses, #2 Pencil, Clip board, Calculator. No sharing will be permitted. No Cell Phones Used during competition. Appropriate PPE and measuring equipment as needed. BYO Multimeters for Continuity Testing. A few will be available.
4. General Categories for Assessment of Knowledge and Skills. (450 points Total)
 - A. Machinery and Equipment
 - Operator Manual (50 points)
 - Machine Practicum (50 points)
 - B. Electrical Analysis Systems
 - AC Wiring Exercise according to 2020 NEC Code, Schematic and Physical (50 points))
 - AC Written Test (Residential, Electric Motor, and 3 Phase questions) (50 points)
 - DC Written and Component Identification Test (50 points)
 - Center Pivot Control Box or Tower Box Schematic Test (50 points)
 - C. Hydraulic Systems
 - Parts and Symbol Identification and some Calculations (50 points)
 - D. Metals and Welding
 - Written Test (Knowledge and Blueprint (Including Weld Symbols) Interpretation) OAC, SMAW, GMAW, and GTAW Processes, Steel and Aluminum Metals (100 points)
 - E. Total Points Possible = 450 points
 - Ties broken by Operator Manual score followed by Machine Practicum followed by Welding Written Test.