# 2012 NACTA
# Agricultural Mechanics Contest

**Date:** Friday, April 13, 2012

1. Each team will consist of four (4) students who are enrolled as full-time students in an agricultural degree or certificate granting program at the institution which they are representing.
2. Each institution will be limited to one (1) team. Alternates may compete as individuals for individual awards.
3. All 4 scores will compose team total.
4. The contest will be composed of six categories as follows:
    a. Agricultural Equipment Electrical Systems
    b. Air Conditioning Systems
    c. Agricultural Machinery (Planting, Harvesting, and Tillage Equipment)
    d. Engines
    e. Hydraulics
    f. Transmissions
5. In all six categories, all major brands of farm equipment may be used. The machinery may be harvesting, planting, and tillage equipment for wheat, corn, soybeans, and grain sorghum. Also included will be hay harvesting and processing equipment, as well as tractors of any size.
6. In each of the six areas there will be four divisions: an objective written examination, troubleshooting, tool and components identification, and calibration/skills sections.
7. Contestants should complete as much as possible in each area, because their scores will be positively scored only. Teams will compete as pairs for the trouble-shooting section of the contest as they were registered prior to the beginning of the contest. Each contestant will receive the team's troubleshooting score for computation of his individual score.
8. Contestants will be expected to observe proper safety practices at all times during the contest. Personal safety items such as safety glasses and appropriate footwear will be required. Each contestant needs to provide their own calculator, clipboard, and #2 pencils as the written test will be computer graded.
9. In scoring the contest, troubleshooting will receive greatest emphasis. Each contest must participate in all contest divisions and categories to be eligible for both individual and team awards. Subjective and/or objective evaluation will be used by each troubleshooting judge.
10. Troubleshooting section will be composed of 12 stations with 2 problems from each of the 6 categories listed earlier.
11. After a brief explanation of what tasks are to be performed, each troubleshooting pair will be allowed 12 ½ minutes per station.

12. Troubleshooting evaluation criteria:
    a. Process
    b. Arrival to solution
    c. Safety (If extreme safety violations occur, the team pair will be disqualified.)
    d. Answered supportive questions
    e. Tool usage
    f. Resource usage
    g. No points will be given for arriving at the solution accidentally.
13. The top troubleshooting pair will each receive individual plaques.
14. Non-participating students, instructors, judges, or guests will not be allowed to view the contest.
15. Students must remain in their designated room or station until the judge indicates when and where to go next. Any student viewing any portion of the contest in which he is not assigned will be immediately disqualified.
16. In the identification section there will be 20 parts, tools or components in each of the 6 categories.
17. In the calibration/skills section there will be 12 stations for precision measuring and calibration skills which may or may not come from all 6 categories.
18. Individual ties will be broken with scores in the following sequence:
    a. Written Exam
    b. Parts Identification
    c. Toss of Coin
19. Team ties will be broken with scores in the following sequence:
    a. Troubleshooting
    b. Written Exam (combination of individual scores)
    c. Toss of Coin
20. Troubleshooting ties will be broken with scores in the following sequence:
    a. Skills combined score
    b. Toss of Coin