



Georgia FFA Association

AGRICULTURAL MECHANICS CDE

I. OVERVIEW

The Georgia Agricultural Mechanics Career Development Event is designed as a modified version of the National Career Development Event following the procedures outlined in the National FFA Organization Career Development Handbook as modified annually by the state career development committee.

II. PURPOSE

Technological advances in American Agriculture continue to influence the way students must prepare for their futures. Students entering the workforce need a strong knowledge base and the ability to comprehend processes common to agricultural mechanics. Employers want productive workers and managers that can access and use a broad range of information. The most sought after employees are those who communicate effectively, continue to stay current with modern technology, and work successfully as individuals and as team members. Students with these skills and abilities are more competitive in the job market, receive financial rewards, and are selected for advancement.

III. ELIGIBILITY

This event is open to students in grades 9-12 who are agricultural education students, and are paid members of a chartered FFA chapter. Each member of the team must be a member of the chapter registering them, and each student's name must appear on the chapter's FFA roster at least 10 days prior to competition above the chapter level.

Chapters are limited to one (1) CDE team per chapter. The top two (2) teams from each area will be eligible to participate in the State Agricultural Mechanics CDE. The state winning team will represent Georgia in the National Agricultural Mechanics CDE. Any member of a state winning team is ineligible to compete in this event again.

IV. SPECIAL NEEDS REQUEST

To report any special needs or request special services for a student to compete in a Career Development Event or FFA Award area (Area or State level), it is the responsibility of the FFA advisor to provide a detailed and specific request and explanation in writing. Requests should include written documentation from the school system verifying the IEP and need being requested. Written requests must be submitted to the CDE Superintendent prior to registering for the CDE/event (at least 3 weeks prior to the date of competition.)

V. RULES

Each event participant must adhere to the safe practices and work habits appropriate when performing required activities. Participants are responsible and must provide all personal safety equipment and other tools and equipment as assigned by state committee.



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VI. EVENT FORMAT

Teams may consist of three or four members. Each team member will compete in each of five (5) areas of Machinery & Equipment Systems, Electrical Systems, Energy Systems, Structural Systems, and Environmental & Natural Resource Systems. Problem Solving and skills will be a part of each of the five areas. There will be a team activity that may utilize computer and/or GPS technology in addition to other tools/devices associated with the National Ag Mechanics CDE technical areas. There will be a twenty-five question multiple choice test. Questions may be drawn from any of the five Ag Mechanics areas recognized in the National Agricultural Mechanics CDE and reference materials listed below.

VII. SCORING

Team Ranking is determined by combining the scores of the top three students from each team. Teams that for whatever reason, are fewer than three members are not eligible for team awards. Skill Areas: Machinery & Equipment Systems (50 points, 25 minutes to perform skill); Electrical Systems (50 points, 25 minutes to perform skill); Energy Systems (50 points, 25 minutes to perform skill); Structural Systems (50 points, 25 minutes to perform skill); Environmental/Natural Resource Systems (50 points, 25 minutes to perform skill); 25 Written Exam Questions (50 points, 60 minutes to answer all questions) (25 Exam questions and 60 minutes to complete at Area); Team Activity-100 points, 60 minutes to solve team activity (No Team Activity at Area CDE).

Exam = 50 points x 3 (150 points possible)

Skills = 5 @ 50 points = 250 points x 3 (750 points possible)

Team Activity = 100 points possible

Total possible points = 1,000 (900 at Area)

VIII. TIE BREAKERS

In the Possibility of a tie in team score, the team with the highest score on the team activity will be declared the winner. In the case of a tie at this point, the total of the top three individual scores on the comprehensive test will be used to determine the winner. In case of a tie in individual scores, the individual with highest score on the comprehensive test will be declared the winner.

IX. AWARDS

Awards shall be determined each year by the Board of Trustees of the Georgia FFA Foundation. This event is made possible through the Georgia FFA Foundation as a special project of an industry sponsor or from the Foundation general fund.



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X. REFERENCES

This list of references is not intended to be inclusive. Other sources may be utilized and teachers are encouraged to make use of the very best instructional materials available. The goal of the State FFA Agricultural Mechanics Career Development Event is to guide and promote quality instructional programs in agricultural mechanics. The following list contains references that may prove helpful during event preparation.

State FFA Agricultural Mechanics CDE Reference List:

Honda – GCV135/GCV160/GCV190/GSV190 Engine Shop Manual – Item/Part #:61ZM000E4

Small Gas Engines by Alfred C. Roth, (Goodheart-Wilcox) - Current Edition

Modern Carpentry by Wagner & Smith (Goodheart-Wilcox) – Current Edition

Mechanical Technology in Agriculture by Johnson, Harper, Lawver, Buriak, (Interstate Publishers, Inc.)

Agricultural Mechanics Fundamentals and Applications by Ray Herren, (Delmar Publishers) - Current Edition

Modern Welding by Althouse, Turnquist, Bowditch, Bowditch, (The Goodheart-Wilcox Company, Inc.) – Current Edition

Essentials of Welding by Raymond J. Sacks, (Glenco Publishing Company) – Current Edition

Arc Welding by William T. Squires, American Association for Vocational Instructional Materials.

Basics of GMAW & GTAW, (published by AAVIM) – Current Edition

Welding, Deere & Company, (John Deere Publishing) – Current Edition

Basic Tig & Mig Welding (GTAW & GMAW) by Griffin, Roden, Briggs, (Delmar Publishers) – Current Edition

Electrical Wiring, American Association for Vocational Instructional Materials.

Agriculture Wiring Handbook, (published by National Food and Energy Council)

National Electrical Code (published by National Fire Protection Association)

Electrical Controls by James M. Allison, American Association for Vocational Instructional Materials.

How Electric Motors Start and Run, American Association for Vocational Instructional Materials.

Electric Motors Selection/Protection/Drives, American Association for Vocational Instructional Materials.

Briggs & Stratton Repair Manuals, Briggs & Stratton Corp.

Small Engine Care & Repair (published by Briggs & Stratton) (Part No. 274041)

Small Engines by R. Bruce Radcliff (Authorized by Briggs & Stratton)

Tecumseh Repair Manuals, Tecumseh Corp.

Getting Started with Geographic Information Systems, by Keith C. Clarke, 2nd edition, 1999. Prentice Hall. – Current Edition

The Precision Farming Guide for Agriculturists Textbook, John Deere Publishing. – Current Edition

Basics of Electrical Motors, AAVIM – Current Edition