

DIVISION V - 4-H ENGINEERING EVENTS

Division Rules & Regulations:

1. Only 4-H Members may participate in this division, except for Section VI (4-H/FFA Tractor Operators Safety) - FFA Members may participate in this section. **4-H participant** registration is completed via 4-H Online and approved by the local 4-H Extension Educator. Website: <https://v2.4honline.com/>. **FFA participants cannot** should contact their regional FFA for instructions on how to register for the contest.
2. There is a \$5.00 participation fee per youth for each event.
3. Participants must comply with "General State Fair Rules & Regulations", "General 4-H and FFA Rules & Regulations", these "Division Rules & Regulations" and the applicable "Section Rules & Regulations".
4. Participants will participate according to their 4-H Age (as of 1/1/2022): Junior (ages 8-10); Intermediate (ages 11-13), Senior (ages 14-18) unless noted.
5. **Events are subject to participation and can be cancelled due to low registration.**
6. Where applicable, visual materials must be readable from 25 feet. Projector will be provided. Presentations requiring a computer should be saved to a flash drive.
7. Participants will be disqualified at the discretion of the Superintendent for unsafe practices or acts unbecoming a 4-H/FFA member.
8. Scores for all parts of the event will be combined to determine the overall placing. **Where necessary, the Written Exam will be the tie-breaker.**
9. Awards: Ribbons will be awarded to the 1st-10th Place in each class. Premiums: 1st (\$15), 2nd – 10th (\$10). Trophies and Rosettes will be awarded to the 1st Place Individual in each age division. Senior 1st Place Individuals may have the opportunity to represent Maryland at the National event.
10. **Entries are due July 31, 2022** (4-H via 4-H Online: v2.4honline.com/, FFA via regional FFA). **The Maryland State Fair system is NOT to be used for registration. Interested participants without internet access should contact their County Extension Educator/Chapter FFA Advisor for assistance.**
11. Event information including recommended study materials and course layouts can be found at <https://extension.umd.edu/programs/4-h-youth-development/program-areas/stem> under the "Engineering" tab.

SECTION 1 - 4-H BICYCLE SAFETY EVENT

Superintendent: Dwayne Murphy, dmurphy2@umd.edu

Co-Superintendent: Chuck Schuster, cfs@umd.edu

Date: Saturday, September 10, 2022 at 10am

Location: North End Cow Palace

Section Rules & Regulations:

1. Participants must be enrolled in the 4-H Bicycle Project for the current year. Each 4-H Office may enter 3 individuals per age group. Contact your local UME 4-H office if you are interested in this event. **Individuals must enter through the 4-H Online registration system by July 31st.**
2. All participants must wear an approved "safety helmet" that is properly fitting. Participants must bring own bicycles and bicycles must fit the rider properly.
3. The event will include: (a) Written Exam; (b) Practical Exam (Parts ID); (c) Skill riding event; and (d) City streets riding event.

CLASSES

V1001 Junior Bicycle Event

V1004 *Award Class (Fair Use Only) – Bicycle Junior Champion*

V2001 Intermediate Bicycle Event

V2004 *Award Class (Fair Use Only) – Bicycle Intermediate Champion*

V3001 Senior Bicycle Event

V3004 *Award Class (Fair Use Only) – Bicycle Senior Champion*

SECTION 2 - 4-H SMALL ENGINE EVENT

Superintendent: Dwayne Murphy, dmurphy2@umd.edu

Co Superintendent: Chuck Schuster, cfs@umd.edu

Date: Saturday, September 10, 2022 at 4pm

Location: North End Cow Palace

Section Rules & Regulations:

1. This event is designed to give 4-H members participating in the 4-H Small Engine Project during the current year, an opportunity to demonstrate their knowledge of small engine operation, care, maintenance, and safety, by competing with other 4-H Members. Safety is stressed throughout this event. Contact your local UME 4-H office if you are interested in this event. **Individuals must enter through the 4-H Online registration system by July 31st.**
2. This event will include: (a) Written Exam (20 minutes); (b) Small Engine Parts Identification (15 minutes, 25 parts scored 4 points per part identified); (c) Visual Presentation (**15 minutes maximum, 5-10 minutes preferred**). Visual Presentation may include explanation and/or demonstration of proper care, maintenance, adjustment, and functions of the various components; safety; and parts identification of small engines and related machines.
3. Participants must furnish their own demonstration materials. Visual materials must be readable from 25 feet. Presentations requiring a computer should be saved to a flash drive.
4. Participants must not start the engines and flammable liquids may not be present or used in the Presentation.

CLASSES

V1012 Junior Small Engine Event

V1013 *Awards Class (Fair Use Only) - Junior Small Engine Champion*

V2012 Intermediate Small Engine Event

V2013 *Awards Class (Fair Use Only) - Intermediate Small Engine Champion*

V3012 Senior Small Engine Event

V3013 *Awards Class (Fair Use Only) – Senior Small Engine Champion*

SECTION 3 - 4-H LAWN TRACTOR EVENT

Superintendent: Dwayne Murphy, dmurphy2@umd.edu

Co Superintendent: Chuck Schuster, cfs@umd.edu

Date: Saturday, September 10, 2022 at 1pm

Location: North End Cow Palace

Section Rules & Regulations:

1. This event is designed to give 4-H members participating in the 4-H Small Engines/Entrepreneurship/Workforce Preparation/Learn-to-Earn Program during the current year, an opportunity to demonstrate their knowledge and skills in the areas of lawn care, business management and lawn and garden tractor (less than 20 hp) operation, maintenance and safety, while competing with other 4-H Members. Safety is stressed throughout this event. Each 4-H Office may enter 2 individual per class (by 4-H age). Contact your local UME 4-H office if you are interested in this event. **Individuals must enter through the 4-H Online registration system by July 31st.**
2. The Lawn Tractor driving portion gives participants an opportunity to demonstrate their skill in operation of small tractors. Safety in work habits and equipment operation is stressed throughout the event. The participant will operate a lawn and garden tractor (less than 20 Hp) through the prescribed course. Penalty points will be assessed for errors in safety and poor operation. Participants will be given limited time (up to 4 minutes) to study and familiarize themselves with the machine. During this time the tractor may be operated in the immediate area of the event but not on the course. Participants must be physically large enough to operate the tractor without bypassing the safety interlock systems or receiving help from others.
3. This event will include: (a) Written Exam (20 minutes); (b) Learn-to-Earn/Parts/Materials Identification (15 minutes, 15 items scored 6 points per item identified); (c) Lawn Tractor Safety; (d) Lawn Tractor Driving (8 minutes).

CLASSES

V2018 Intermediate Learn to Earn and Safety Event

V2019 Award Class (Fair Use Only) Lawn Tractor Intermediate Champ

V3018 Senior Learn to Earn and Safety Event

V3019 Award Class (Fair Use Only) Lawn Tractor Sr Champ

SECTION 4 - 4-H ELECTRIC/ENERGY EVENT

Superintendent: Dwayne Murphy, dmurphy2@umd.edu

Co Superintendent: Chuck Schuster, cfs@umd.edu

Date: Saturday, September 10, 2022 at 5pm

Location: North End Cow Palace

Section Rules & Regulations:

1. This event is designed to give 4-H members in the 4-H Electric Program during the current year, an opportunity to demonstrate their knowledge of electricity, the efficient use of electricity, care, maintenance, and safety of electrical equipment and apparatus found in agriculture and in the home, including electronics, while competing with other 4-H Members. Safety will be stressed throughout the event. Contact your local UME 4-H office if you are interested in this event. **Individuals must register through the 4-H Online registration system by July 31, 2022.**
2. This event will include: (a) Written Exam (20 minutes); (b) Identification of Electrical Equipment and/or parts of the equipment (15 minutes, 15 parts, score 6 points per part identified); (c) Visual Presentation (**15 minutes maximum, 5-10 minutes preferred**).
3. Participants must furnish their own demonstration materials. Visual materials must be readable from 25 feet. A projector will be provided. Presentations requiring a computer should be saved to a flash drive.

CLASSES

V1022 Junior 4-H Electric/Energy Event

V1023 Award Class (Fair Use Only) Electric / Energy Jr Champion

V2022 Intermediate 4-H Electric/Energy Event

V2023 Award Class (Fair Use Only) Electric / Energy Intermediate Champion

V3022 Senior 4-H Electric/Energy Event

V3023 Award Class (Fair Use Only) Electric / Energy Senior Champion

SECTION 5 - 4-H/FFA TRACTOR OPERATORS SAFETY EVENT

Superintendent: Dwayne Murphy, dmurphy2@umd.edu

Co Superintendent: Chuck Schuster, cfs@umd.edu

Date: Thursday, August 25, 2022 - 12pm: Come in early to practice and get familiar with tractor, Exam at 1pm with practical exam and driving portion following.

Location: Lower level of the grandstands and then infield area of Race Track

Section Rules & Regulations:

1. Participants must be enrolled in the 4-H Tractors Program for the current year or be eligible to represent the school/region in FFA sponsored competitive Tractor activities. Each 4-H office may enter 1 senior 4-H participant. Each FFA region may enter 4 FFA participants as determined through a regional selection process. Previous State Individuals are not eligible to participate representing the same organization. Each participant may represent only one organization in any given year.
2. **4-H participants must register through the 4-H Online registration system by July 31, 2022 for this event**, and should notify their local UME 4-H office indicating their intention to register. **FFA participants** should contact their regional FFA representative who will provide instructions on how to register for the contest.
3. Participants shall wear FFA or 4-H T-shirts, Jackets or Sweatshirts and be appropriately dressed. Improperly dressed individuals will not be allowed to participate at the discretion of the event officials.
4. This event includes: (a) Written Exam (50 questions, 20 pts per question); (b) Practical Exam; (c) Skill Driving (there will be a 5000 pt penalty for not driving the prescribed course).

CLASSES

V3037 4-H Senior Tractor Operator Event

V3038 Award Class (Fair Use Only) 4-H Senior Tractor Safety Champion

V3039 FFA Tractor Operator Event

V3040 Award Class (Fair Use Only) FFA Senior Tractor Safety Champion