

## 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. Entries are made by the 4-H Extension Educator/FFA Advisor (**exceptions to this are entry for the electric/energy, and small engine contests – see Rule 12 below**).
2. There is a \$5.00 participation fee for each event. Participants may only compete in ONE of the following events (since they occur at the same time): Small Engine, Bicycle, or Electric/Energy.
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 1/1/2018): Junior (ages 8-10); Intermediate (ages 11-13), Senior (ages 14-18) unless noted.
5. The senior division winner within each section may earn the opportunity to represent the Maryland 4-H Program in that respective event at the National Youth Engineering Challenge. See the National Youth Engineering Challenge rules available on the internet for more information about these national events.
6. Previous senior winners who have accepted a national trip may not participate again in the same event. Previous Senior National Trip Winners in one event may participate in another event in the senior age division.
7. Events are subject to participation and can be cancelled due to low registration.
8. Where applicable, visual materials must be readable from 25 feet. Participants must bring their own laptops. A projector will be provided.
9. Participants will be disqualified at the discretion of the Superintendent for unsafe practices or acts unbecoming a 4-H/FFA member.
10. 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.
11. Awards: Ribbons will be awarded to the 1st-10th Place in each class. Premiums: 1<sup>st</sup> (\$15), 2<sup>nd</sup> – 10<sup>th</sup> (\$10). Trophies and Rosettes will be awarded to the 1<sup>st</sup> Place Individual in each age division. Senior 1<sup>st</sup> Place Individuals will represent Maryland at the National event.
12. **Individuals must enter through the online registration system for the electric/energy and small engine contests. Pre-entry is required. YOU MUST USE THE INTERNET ENTRY SYSTEMS FOUND AT [www.marylandstatefair.com](http://www.marylandstatefair.com). Internet entries are due July 31, 2018. Exhibitors without internet access should contact their County Extension Educator for assistance.**
13. Maryland State Fair events closely follow the format of the National Youth Engineering Challenge. Event information including recommended study materials and course layouts can be found at <http://www.ydae.purdue.edu/naenagr/naenagr.html>

### **SECTION I - 4-H BICYCLE SAFETY EVENT**

Superintendent: Dwayne Murphy, [dmurphy2@umd.edu](mailto:dmurphy2@umd.edu)

Co-Superintendent: Chuck Schuster, [cfs@umd.edu](mailto:cfs@umd.edu)

Date: Monday August 27, 2018 @ 4:00pm

Location: southwest corner of the 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 1 individual per class (by 4-H age).
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) Bicycle safety inspection.
4. Participants may only compete in ONE of the following events (since they occur at the same time): Small Engine, Bicycle, or Electric Energy.

### **CLASSES**

V1001 Junior Bicycle Event – Age 8  
V1002 Junior Bicycle Event – Age 9  
V1003 Junior Bicycle Event – Age 10

V3001 Senior Bicycle Event – Age 14  
V3002 Senior Bicycle Event – Age 15 & 16  
V3003 Senior Bicycle Event – Age 17 & 18

V2001 Intermediate Bicycle Event – Age 11  
V2002 Intermediate Bicycle Event – Age 12  
V2003 Intermediate Bicycle Event – Age 13

V1004 Award Class (Fair Use Only) – Bicycle Junior Champion  
V2004 Award Class (Fair Use Only) – Bicycle Intermediate Champion  
V3004 Award Class (Fair Use Only) – Bicycle Senior Champion

### **SECTION II - 4-H SMALL ENGINE EVENT**

Superintendent: Dwayne Murphy, [dmurphy2@umd.edu](mailto:dmurphy2@umd.edu)

Co Superintendent: Chuck Schuster, [cfs@umd.edu](mailto:cfs@umd.edu)

Date: Tuesday, August 28, 2018 at 1:00pm

Location: southwest corner of 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. Individuals must enter through the 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. Participants must bring their own laptops. Visual materials must be readable from 25 feet.
4. Participants must not start the engines and flammable liquids may not be present or used in the Presentation.
5. Participants may only compete in ONE of the following events (since they occur at the same time): Small Engine, Bicycle, or Electric/Energy.

### **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 III - 4-H LAWN TRACTOR EVENT

Superintendent: Dwayne Murphy, [dmurphy2@umd.edu](mailto:dmurphy2@umd.edu)

Co Superintendent: Chuck Schuster, [cfs@umd.edu](mailto:cfs@umd.edu)

Date: Tuesday, August 28, 2018 at 4:00 pm

Location: southwest corner of the 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. Note - No online registration this year.
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 IV - 4-H ELECTRIC/ENERGY EVENT

Superintendent: Dwayne Murphy, [dmurphy2@umd.edu](mailto:dmurphy2@umd.edu)

Co Superintendent: Chuck Schuster, [cfs@umd.edu](mailto:cfs@umd.edu)

Date: Monday, August 27, 2018 at 1:00pm

Location: southwest corner of the 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. **Individuals must register through the online registration system by July 31, 2018.**
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. Participants must bring their own laptops. A projector will be provided.
4. Participants may only compete in ONE of the following events (since they occur at the same time): Small Engine, Electric/Energy, or Bicycle.

#### 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 V - 4-H/FFA TRACTOR OPERATORS SAFETY EVENT

Superintendent: Dwayne Murphy, [dmurphy2@umd.edu](mailto:dmurphy2@umd.edu)

Co Superintendent: Chuck Schuster, [cfs@umd.edu](mailto:cfs@umd.edu)

Date: Wednesday, August 29, 2018 – Noon: 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. 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.
3. 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