



**MODULE TITLE**

Hands-On Training (HOT) Evolution: All-Terrain Vehicle Operator

**RATIONALE**

ATV Operators are at high risk of rollover/overturn incidents in the farm/agricultural environment.

**PREQUISITES / CO-REQUISITES**

- ATV Safety Classroom Training

**RECOMMENDED CLASS SIZE**

Classroom: 16 Persons or Less

**ESTIMATED TIME REQUIREMENT**

HOT Evolution: 3 Hours for up to 12 students

**STUDENT LEARNING OUTCOMES**

When used in conjunction with classroom training, students are expected to:

- Wear appropriate personal protective equipment for ATV operations;
- Perform a pre-use inspection of his/her ATV and determine whether safe to operate;
- Safely operate an ATV on a closed course; and
- Demonstrate active riding skills.

**AUTHORITY & REFERENCES**

U.S. Forest Service Utility-Terrain Vehicle Operator’s Training Course  
U.S. Consumer Product Safety Commission ATV Safety Program  
VFIS Emergency Services UTV/ATV Safety Program

**AUTHORIZED TRAINERS**

Any Trainer recognized by Virginia Tech EHS as such under Grant # SH-99061-SH0.

**EVALUATION**

Student Knowledge:

- Classroom exercises during prerequisite training.
- Basic competency as demonstrated during this evolution.

**DISCLAIMER**

The Farm & Agricultural Safety Training (FAST) Program was produced under grant number SH-39188-SH2 from the Occupational Safety and Health Administration, U.S. Department of Labor. It does not necessarily reflect the views or policies of the U.S. Department of Labor, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

**PROGRAM LOGISTICS**

**TRAINER’S CHECKLIST**

- Large, open area (unpaved surface) at least 200 feet x 200 feet in size.  
\*\*\* Be sure property owner understands and accepts nature of activity being performed (ATV riding) \*\*\*
- ~50 traffic cones (18” size or higher, do not have to be MUTCD-complaint)
- Each student must have proper PPE as outlined under “Safety”, below.
- One ATV per student in good working order (ATV may be provided by dealer, training host, or students)  
\*\*\* ATVs must be checked by Trainer to ensure no overt safety issues, of appropriate size and configuration for class \*\*\*
- Spare fuel and other fluids as needed based on class size
- Ensure restroom availability.
- Cardboard boxes of various sizes, marked with “weights” for use as simulated loads.
- Assorted webbing, nylon rope, bungee cords, and ratchet straps for use securing cargo to ATVs

**CONTINGENCY PLANNING**

Instructor/Student Ratio Changes:

Major increase



- Split into multiple sessions to meet faculty/student ratio
- Major decrease
- Consolidate groups to increase class size

**Weather**  
This evolution can be conducted in most weather conditions.

- Depending on class size, a tent or other shelter should be used to reduce weather exposure, allow for shade, etc.
- Instructors should use care to protect surfaces from unnecessary wear and tear by ATV use.
- Monitor weather for potential issues / severe weather events.

**Equipment/Props Failure**

- Ensure at least one properly maintained, fueled ATV is available for instructor demonstration and use, and to allow students to complete the evolution should his/her ATV experience a mechanical failure.
- Ensure a limited amount of fuel and common fluids are available for students.
- A small selection of common tools may also be useful.

**Emergency During Training**

- Know location of nearest AED, Portable Fire Extinguisher, and telephone.
- Ensure everyone knows the evolution’s physical address and identify the closest rally point.

**SAFETY ANNOUNCEMENTS**

- Upon hearing “STOP” or an air horn blast, all activity should stop and await further direction.
- Students MUST wear/use all personal protective equipment in the same manner that it will be used on the farm/other site.
- PPE / Clothing requirements to participate in this session include:
  - Helmet of an acceptable type, approved by the US DOT or Snell and in good condition
  - Long sleeve shirt and long pants
  - Over-the-ankle boots appropriate for the training environment
  - Gloves
  - Eye protection if not integrated into the helmet
- No student shall be allowed into the practice area without proper PPE

**LEGAL CONSIDERATIONS**

- Instructors should be familiar with all local, state and federal laws governing ATV use.

**SUPPLEMENTAL RESOURCES / WEB SITES**

- Evolution Performance Sheet: ATV Operator

**CONDUCTING THE EVOLUTION**

**TRAINER ACTIVITY**

Trainers should:

- Demonstrate the correct pre-use inspection of an ATV;
- Demonstrate proper donning / doffing of helmet and other personal protective equipment;
- Discuss the safe operating parameters of the ATV he/she will be using;
- Physically walk all students through the evolution, describing expected behavior/safe operation through each station;
- Safely operate an ATV through the evolution while students observe;
- Distribute simulated cargo / loads to students for use during evolution;
- Observe and provide feedback to each student while he/she operates an ATV on the course; and
- Ensure all safety processes are followed throughout training.

**STUDENT ACTIVITY**

Students are expected to:

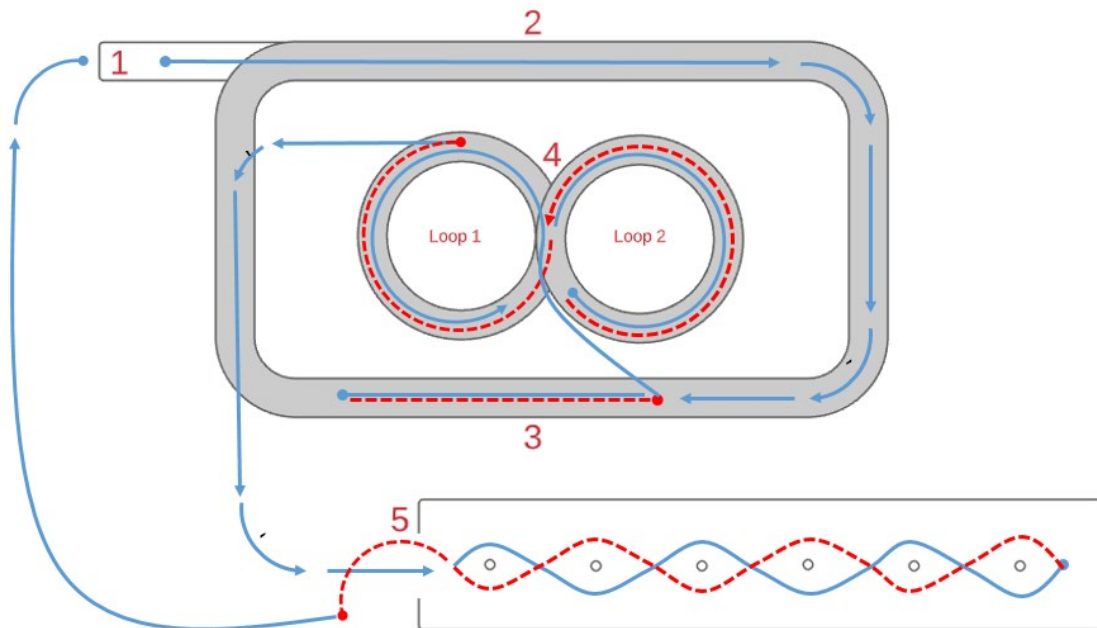
- Perform a pre-use inspection of his/her ATV;
- Select and use appropriate personal protective equipment for use during the evolution;
- Safely secure any simulated cargo or load to the ATV; and
- Operate the ATV safely, moving through individual exercises to build competency.



## EVOLUTION LAYOUT

The specific layout(s) of the evolution will be dictated by the nature of the space available. Individual exercises may be set up in any order to accommodate layout and number of students. Blue lines indicate forward travel. Red lines indicate travel in reverse gear. Specific activities may be modified to meet local needs. Suggested activities include:

1. "Pre-Ride Inspection and Safety";
2. "Oval Track" consisting of: Straight Line (140'), lane width 72"; right-hand turn (13' radius); straight line (90'); right-hand turn (13' radius).
3. "Diminishing Clearance". Straight lane (140'). Upon exit of right-hand turn, lane width 72" for 1<sup>st</sup> 30'. Lane diminishes equally over next 100' to minimum width of 60". Stop cone 130'. Rider shifts to reverse and operates 100' the beginning of Diminishing Clearance station.
4. "Figure 8". Circle centers 50 feet apart, lane 72" wide; Rider enters via slight right and proceeds counterclockwise through Loop 1 following to Loop 2 clockwise. Stop point at roughly 7PM on Loop 2. Reverse through Loop 2 Counterclockwise into Loop 1 clockwise. Stop point at roughly 12pm on Loop 1. Exit to "Oval Track", follow for 90' (or as laid out) and enter "Serpentine".
5. "Serpentine". Establish a boundary box of 160' x 20'. Set six cones with a separation of 20' along centerline. Rider stops after last cone and reverses through serpentine. Upon exiting serpentine, return to "Pre-Ride Inspection and Safety".





**SKILL PERFORMANCE SHEET -- ATV OPERATOR SKILLS**

STUDENT NAME:		1	2
<b>Transportation</b>			
	Unloads ATV safely from vehicle bed or trailer using ramps	<input type="checkbox"/>	<input type="checkbox"/>
	Ensures any fuel or fluid spilled during unloading managed properly	<input type="checkbox"/>	<input type="checkbox"/>
<b>Station 1: Pre-Ride Inspection &amp; Safety</b>			
	Inspects ATV according to manufacturer’s operating manual. At a minimum checks: <ul style="list-style-type: none"> <li>• Tire condition and inflation</li> <li>• Proper operation of throttle, clutch and brakes</li> <li>• Lights</li> <li>• Battery and electrical system</li> <li>• Fuel, oil, coolant, and brake fluids</li> <li>• Air filter and exhaust system</li> <li>• Chassis steering and suspension system</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
	Operator dons appropriate clothing and PPE: <ul style="list-style-type: none"> <li>• Helmet (DOT or Snell approved)</li> <li>• Long pants</li> <li>• Long-sleeve shirt</li> <li>• Over-the-ankle boots</li> <li>• Gloves</li> <li>• Eye protection (if helmet is not full-face)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
	If given a simulated load by the Trainer, secures it properly and verbalizes how the load will affect ATV operation.	<input type="checkbox"/>	<input type="checkbox"/>
	Mounts ATV in a safe manner.	<input type="checkbox"/>	<input type="checkbox"/>
	Starts ATV as directed by Operator’s Manual.	<input type="checkbox"/>	<input type="checkbox"/>
<b>Station 2: “Oval Track”</b>			
	Operates ATV safely in a forward direction around the defined course.	<input type="checkbox"/>	<input type="checkbox"/>
	Navigates course at safe speed.	<input type="checkbox"/>	<input type="checkbox"/>
	Slows for cornering and actively shifts weight to suit terrain and course.	<input type="checkbox"/>	<input type="checkbox"/>
	Demonstrates awareness of terrain and obstacles.	<input type="checkbox"/>	<input type="checkbox"/>
<b>Station 3: “Diminishing Clearance”</b>			
	Operates ATV safely in a forward direction through the defined course.	<input type="checkbox"/>	<input type="checkbox"/>
	Demonstrates awareness of changing terrain and adjusts operation accordingly.	<input type="checkbox"/>	<input type="checkbox"/>
	Navigates course at safe speed.	<input type="checkbox"/>	<input type="checkbox"/>
	Stops and shifts the ATV into reverse gear as outlined by the Operator’s Manual.	<input type="checkbox"/>	<input type="checkbox"/>
	Operates ATV safely in reverse gear through the defined course.	<input type="checkbox"/>	<input type="checkbox"/>
<b>Station 4: “Figure 8”</b>			
	Operates ATV safely in a forward direction around the defined course.	<input type="checkbox"/>	<input type="checkbox"/>
	Navigates course at safe speed.	<input type="checkbox"/>	<input type="checkbox"/>
	Slows for cornering and actively shifts weight to suit terrain and course.	<input type="checkbox"/>	<input type="checkbox"/>
	Demonstrates awareness of terrain and obstacles.	<input type="checkbox"/>	<input type="checkbox"/>
	Stops and shifts the ATV into reverse gear as outlined by the Operator’s Manual.	<input type="checkbox"/>	<input type="checkbox"/>
	Operates ATV safely in reverse gear through the defined course.	<input type="checkbox"/>	<input type="checkbox"/>



Station 5: "Serpentine"			
	Operates ATV safely in a forward direction through the defined course.	<input type="checkbox"/>	<input type="checkbox"/>
	Navigates course at safe speed.	<input type="checkbox"/>	<input type="checkbox"/>
	Slows for cornering and actively shifts weight to suit terrain and course.	<input type="checkbox"/>	<input type="checkbox"/>
	Demonstrates awareness of terrain and obstacles.	<input type="checkbox"/>	<input type="checkbox"/>
	Stops and shifts the ATV into reverse gear as outlined by the Operator's Manual.	<input type="checkbox"/>	<input type="checkbox"/>
	Operates ATV safely in reverse gear through the defined course.	<input type="checkbox"/>	<input type="checkbox"/>
Completion			
	Returns ATV to "Pre-Ride Inspection and Safety" Location or other designated spot.	<input type="checkbox"/>	<input type="checkbox"/>
	Dismounts ATV safely.	<input type="checkbox"/>	<input type="checkbox"/>
Critical Criteria			
	Uses PPE / Safety equipment throughout operation of the ATV.	<input type="checkbox"/>	<input type="checkbox"/>
	Operator maintains continual awareness of environment and terrain throughout operation.		
	Maintains safe speed throughout operation of the ATV (control of throttle).	<input type="checkbox"/>	<input type="checkbox"/>
	Maintains control of hands/feet throughout operation of the ATV.	<input type="checkbox"/>	<input type="checkbox"/>
	Operates ATV without striking objects or persons.	<input type="checkbox"/>	<input type="checkbox"/>
Trainer Comments			
TRAINER NAME			DATE