

# **AORSI-300-HUM Workbook**

## **Overview**

This course focuses on human behavior, decision-making, and group dynamics in off-road operations. Emphasis is placed on preventing accidents caused by fatigue, impairment, or poor communication. Students will gain tools to recognize risk factors, apply sound judgment, and strengthen group safety.

## **Learning Objectives**

- Recognize the role of fatigue, alcohol, and stress in accidents.
- Apply safe decision-making models in high-pressure situations.
- Establish communication protocols for groups.
- Enhance situational awareness during off-road activities.

# **Module 1: Human Error in Off-Road – Common Causes**

Human error is the leading factor in most off-road incidents. Common mistakes include overconfidence, distraction, group pressure, and misjudgment of terrain. Recognizing these tendencies allows operators to implement countermeasures such as pre-trip planning, risk assessments, and checklists. Instructors should highlight real-life accident reports to emphasize the consequences of poor decisions.

Course Design Suggestion: Use accident case studies to analyze how human error led to incidents. Encourage group discussions on alternative decisions.

Exercise: Write down three examples of human error that could occur on an off-road trip and propose prevention strategies for each.

Reflection Question: Why is human error considered the most preventable cause of accidents?

## **Module 2: Fatigue, Alcohol, and Drug Impairment Risks**

Fatigue and impairment dramatically increase the likelihood of accidents. Off-road environments often involve long hours, extreme weather, and high stress. Operators must understand how alcohol, drugs, and even lack of sleep impair reaction times, judgment, and coordination. Course content should also cover the legal consequences of operating vehicles under the influence.

Course Design Suggestion: Create a simulation exercise where students attempt coordination tasks while experiencing simulated impairment (e.g., vision distortion goggles).

Exercise: Develop a fatigue management plan for a multi-day off-road event.

Reflection Question: How can group leaders identify when someone is unfit to drive due to impairment or fatigue?

## **Module 3: Communication Systems & Protocols**

Clear communication is essential for group safety during off-road activities. Miscommunication can lead to accidents, lost participants, or delayed responses. Protocols may include radio etiquette, hand signals, and designated communication leaders. Course developers should emphasize redundancy in systems—having both radios and backup methods.

Course Design Suggestion: Conduct a field drill where groups navigate terrain using only radio communication, highlighting challenges and solutions.

Exercise: Draft a standard communication protocol for a group of five vehicles on a trail ride.

Reflection Question: Why is it important to have redundancy in communication systems during off-road operations?

## **Module 4: Situational Awareness & Leadership in Groups**

Situational awareness means being alert to the environment, vehicle conditions, and group dynamics. Strong leadership fosters accountability, reduces risk-taking, and ensures everyone's voice is heard. Students should learn techniques for scanning terrain, monitoring group well-being, and making safe decisions under pressure.

Course Design Suggestion: Role-play scenarios where group leaders must make quick decisions during emergencies while balancing group safety and objectives.

Exercise: List five indicators that situational awareness may be declining in a group.

Reflection Question: How does effective leadership reduce the risks associated with group off-road travel?

## Final Assessment

Task: Develop a group safety plan for a multi-vehicle off-road trip. Include fatigue management, communication protocols, and situational awareness strategies. Additionally, complete a written exam answering the following sample questions:

1. What are three common causes of human error in off-road incidents?
2. How does fatigue impair safe decision-making on the trail?
3. What are two advantages of using standardized communication protocols?
4. How can leaders maintain group situational awareness during long trips?
5. Why is leadership critical to preventing accidents in group off-road activities?

**Duration:** 4 hours (classroom or online)