



AORSI Instructor Guide

Course Title: Weather & Seasonal Preparedness (WX)

Duration: 5 Hours

Audience: Off-road operators, trainers, and expedition leaders

Course Overview

This course equips participants with strategies to safely operate in diverse weather conditions and understand how climate and seasonal changes affect off-road terrain. Students will learn to anticipate hazards, adapt vehicle preparation, and manage personal safety in environments shaped by unpredictable weather.

Learning Objectives (Instructor Notes)

- Recognize weather patterns and their impact on terrain. (Tip: Review recent weather-related incidents).
- Adapt driving and recovery techniques to seasonal conditions. (Tip: Use scenario-based learning).
- Prepare vehicles and gear for extreme weather operations. (Tip: Include maintenance demonstrations).
- Manage risks like flash floods, snowpack, and heat exhaustion. (Tip: Emphasize human safety alongside vehicle prep).

Module 1: Weather Impacts on Terrain (Rain, Snow, Heat, Ice) (1.25 hours)

- Explain terrain hazards caused by rain, snow, heat, and ice.
- Course Design Suggestion: Analyze accident reports with weather as factor.
- Exercise: Create a table of hazards and mitigation strategies.
- Reflection: Why is terrain unpredictable after sudden weather change?

Module 2: Seasonal Preparedness (Winterizing, Summer Cooling) (1.25 hours)

- Teach winterizing (antifreeze, tires, recovery gear) and summer prep (cooling, hydration).
- Course Design Suggestion: Class develops seasonal maintenance checklists.
- Exercise: Write winterizing process for snowy terrain trip.

- Reflection: How can seasonal neglect increase breakdown risks?

Module 3: Vehicle Adjustments for Climate Extremes (1.25 hours)

- Cover tire pressure, block heaters, radiators, waterproofing.
- Course Design Suggestion: Lab rotation through vehicle prep stations.
- Exercise: List three modifications for hot desert conditions.
- Reflection: Why is flexibility in vehicle setup important for multiple climates?

Module 4: Human Safety in Extreme Weather (Hydration, Clothing, Shelter) (1.25 hours)

- Teach hydration, layering, emergency shelters, and signs of illness.
- Course Design Suggestion: Role-play recognizing heat exhaustion, hypothermia.
- Exercise: Build gear list for 2-day freezing trip.
- Reflection: How does hydration and gear prep reduce risks?

Final Assessment

Task: Scenario-based planning for an off-road expedition under challenging weather. Plan should include vehicle preparation, driving techniques, and human safety measures. Additionally, complete quiz:

- What terrain hazards are created by heavy rainfall?
- What are two critical steps in winterizing a vehicle?
- Why does extreme heat stress vehicle cooling systems?
- List three indicators of heat exhaustion and treatments.
- How can seasonal preparation reduce risks?

Instructor Preparation Checklist

- Collect past accident/weather reports for discussion.
- Prepare seasonal checklists (winter and summer).
- Set up vehicle prep stations (cooling, tire, waterproofing).
- Gather clothing and gear for cold-weather scenario drills.

Suggested Timing

- Introduction – 10 min
- Module 1 – 75 min
- Module 2 – 75 min
- Module 3 – 75 min
- Module 4 – 75 min
- Final Assessment – 30 min
- Wrap-up & Questions – 10 min