



AORSI Instructor Guide

Course Title: Trail Maintenance & Management (TMAM)

Duration: 6 Hours (classroom + field maintenance exercise)

Audience: Off-road operators, land managers, and trail volunteers

Course Overview

This course introduces best practices for building, maintaining, and managing off-road trails. Students learn how to preserve access while minimizing environmental impact and maximizing safety.

Learning Objectives (Instructor Notes)

- Identify principles of sustainable trail design. (Tip: Emphasize long-term environmental health).
- Perform basic trail maintenance tasks such as erosion control, drainage, and signage. (Tip: Use field demos).
- Understand the role of access points, gates, and permits. (Tip: Relate to local examples).
- Collaborate with land managers to ensure long-term trail use. (Tip: Share success stories of partnerships).

Module 1: Trail Design & Sustainability Principles (1.5 hours)

- Explain importance of aligning trails with terrain, avoiding habitats, and reducing erosion.
- Exercise: Sketch a trail route using natural contours.
- Reflection: How can trail design reduce maintenance costs and impacts?

Module 2: Maintenance Techniques (Grading, Drainage, Repairs) (1.5 hours)

- Teach grading surfaces, installing water bars/culverts, and quick repairs.
- Exercise: Identify three signs of poor drainage and corrective actions.
- Reflection: Why is preventative maintenance more effective than major repairs?

Module 3: Infrastructure: Gates, Signage, Access Points (1.5 hours)

- Discuss role of gates, signage, and access points in trail safety.

- Exercise: Create a mock-up trailhead sign with rules and emergency info.
- Reflection: How does infrastructure improve safety and longevity?

Module 4: Partnerships & Community Stewardship (1.5 hours)

- Highlight importance of collaboration with land managers and user groups.
- Exercise: Draft a plan for a community trail stewardship day.
- Reflection: What role do partnerships play in preserving trail access?

Final Assessment

Task: Students complete a Trail Maintenance Project plan that includes:

- Trail design considerations
- Maintenance priorities
- Infrastructure needs
- Partnership opportunities

Written Exam (Sample Questions):

- What is the most important factor in sustainable trail design?
- List two methods of controlling erosion on off-road trails.
- Why is drainage management critical to trail health?
- What key information should be included on trail signage?
- Describe one benefit of community partnerships in trail management.

Instructor Preparation Checklist

- Print or distribute student workbooks.
- Bring props: trail maps, signage examples, and maintenance tools.
- Prepare case studies of successful trail partnerships.
- Organize a field exercise site in advance.

Suggested Timing

- Introduction – 15 min
- Module 1 – 90 min
- Module 2 – 90 min
- Module 3 – 90 min
- Module 4 – 90 min
- Final Assessment – 30 min
- Wrap-up & Questions – 15 min