

# Module Responsible and Safe Driving with off-road vehicles (4x4)

(7 h)



## Program Description

There are many people who must make use of 4x4 traction vehicles for the development of their professional work.

In this course, technique, safety and control are combined to ensure that workers who need the use of the vehicle in their professional work can be prepared for the field and the city.

**Safe driving** in the field implies **responsibility at the wheel**. The objective of this course is to demonstrate the capabilities of the vehicle and the characteristics that make them different by combining theory and practice in order to reduce occupational road accidents, raise awareness among drivers **improving their knowledge and skills at the wheel** while providing them with practical technique and vehicle control.

### In practice, we will work on:

- Distractions at the wheel
- River fording
- Bridge crossing
- Axle crossing
- Driving in rocky areas
- Chain placement
- Side inclinations
- Ascent and descent of slopes
- Driving in mud

## Development and contents

### Theory

Attendees will be made aware of safe and responsible driving to avoid accidents, the dynamic behavior of off-road vehicles is shown, bringing the vehicle's own characteristics closer to technical concepts such as attack angles, fording capacity and limitations or Off-Road driving.

### Practice

Distractions at the wheel, side inclinations, driving in muddy areas, ascent and descent of slopes, axle and bridge crossings, rocky areas, chain placement and rescue techniques.

## Objectives

- Reducing occupational accidents through awareness and change of attitudes.
- Offering knowledge and providing the necessary technique to develop skills to incorporate defensive and preventive driving, whether in the work or personal environment.
- Improving of off-road vehicle driving.
- Providing participants with the technique through the practice of vehicle control in an emergency situation.

# Module

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### Theoretical Contents

1. Presentation and course rules
2. Characteristics of 4x4 vehicles
  - 2.1 Characteristics by weight
  - 2.2 Characteristics by height
  - 2.3 Ground clearance characteristics
  - 2.4 Quotas (Attack Angle, Exit Angle, Ventral Angle, Lateral Inclination)
  - 2.5 Operation of reducers
  - 2.6 Differential options
3. Basic rules in driving 4x4 vehicles
  - 3.1 Driver's posture
  - 3.2 Speeds suitable for driving situations
  - 3.3 Friction point
4. Different adherence surfaces
  - 4.1 Sand
  - 4.2 Mud
  - 4.3 Snow
  - 4.4 V crossings
  - 4.5 Crests
  - 4.6 Rocks
  - 4.7 Lateral inclination
  - 4.8 Ramp ascent and descent
5. Rescue in 4x4 vehicles
  - 5.1 Rescue tools: Winch, Slings, Perrillos
  - 5.2 Resistance in vehicle entrapments
  - 5.3 Recovery methods

### Contents of practical exercises

1. Vehicle recognition
  - 1.1 Vehicle characteristics: Controls, buttons, icons on dashboard, quotas and angles, anchor points, underside of vehicle, tire pressure, etc...
2. Vehicle rescue
  - 2.1 Wheel change
  - 2.2 Snow chain assembly
  - 2.3 Towing with sling
  - 2.4 Direction changes on ramps
3. Driving exercises
  - 3.1 Vehicle control exercise in Slalom forward and backward
4. Practical exercises on circuit
  - 4.1 Control of clutch friction point
  - 4.2 Ramp ascent and descent
  - 4.3 Axle crossing: Crests, Dips (Ditches), V crossings, Ground cracks
  - 4.4 Passage through different terrains: Mud, Sand/Gravel, Rocks

### Responsible and Safe Driving with all-terrain vehicles (4x4)

**Duration:** 7 hours (1 day)

**Certificate validity:** permanent

**Program:** Theoretical and practical

**Maximum students:** 12 persons per edition

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