

# Unmanned Ground Vehicle Familiarisation and Operation Course



## At a glance...

### Modular customised provision

Delivery Method: Classroom and practical assessment

### Overview in brief

The four-day course combines theory, legal, and real-world experience with hands-on practical demonstrations and driving of a range of UGVs from approx. 50kg to over 2 tonnes.

The course is delivered over twelve separate modules and is concluded with both a written assessment and a practical assessment by one of the UGV instructors.

The course contains an offroad driving element for which it is advised that the attendee holds a current UK Driving License but this is not mandatory.

### The finer details

This is an integrated training and assessment course and on successful completion you'll receive a certificate of competency.

We will guide you through the theory behind UGV's showing how they are 'built up' mechanically and electronically. Then, move on to the practicalities of driving and other considerations with emphasis on safety.

The modules breakdown is as follows:

1. UGV Basics
2. Situational Awareness
3. Manipulation and Robotic Arms
4. UGV Safety
5. Radio Theory





6. Latency
7. Autonomy
8. Applicable Standards
9. Test and Trials Theory (Option)
10. Measurement and Assessment
11. Parameters, Metrics and Optimisation
12. Future UGVs (Option)

### Who should attend?

This course is ideal for anyone who has day to day contact with UGVs, especially those who are looking to introduce UGVs to their own working environment safely or consolidate existing knowledge. It assumes a broad knowledge of technologies.

### What will be covered?

#### Theory

- Uses and history of UGV's.
- Risk assessment.
- Safety Hazards.
- Make structured decisions about if, and how, to tackle obstacles
- Understand the safety aspects of UGV operation.
- Understanding the concepts and components of UGV operation.
- The concepts of 4X4 vehicle, practical and theory.
- A basic understanding of the technologies and operating techniques.
- Understand the fundamental concepts for safe UGV operation including:
  - Situational awareness
  - Radio Theory
  - Teleoperation and anatomy

#### Practical

- Complete pre-drive checks.
- Off road 4X4 experience.
- Identify the controls, systems and components of the vehicles.



- Basic operating techniques
- Traversing obstacles.
- Driving and manoeuvring various vehicles remotely: 8 wheel and tracked vehicles, EOD Robot, 4X4 Ranger.
- Explosive Ordnance Robots and arm manipulation
- Line of site and beyond line of site driving.
- Driving challenges.
- Creation of suitable Risk Assessments for UGV operation.
- Creation of suitable Test and Trials documentation

