

# € TRAINING

Environmental Pollution By Using GPR And  
Syscal R2





# Environmental Pollution By Using GPR And Syscal R2

## Introduction:

This training program equips participants with the knowledge and practical skills necessary for assessing and mitigating environmental pollution using cutting-edge geophysical technologies. It empowers environmental professionals to make informed decisions and take proactive measures in safeguarding ecosystems and public health against the adverse effects of pollution.

## Program Objectives:

At the end of this program, participants will be able to:

- Utilize Ground Penetrating Radar GPR and Syscal R2 effectively for environmental pollution assessment.
- Apply principles and techniques learned to conduct comprehensive pollution surveys and mapping.
- Interpret GPR and Syscal R2 data accurately to identify pollution sources and hotspots.
- Implement fieldwork strategies and safety protocols for efficient data collection.
- Generate detailed reports and communicate findings to stakeholders for informed decision-making.

## Targeted Audience:

- Environmental engineers and consultants.
- Geologists and geoscientists.
- Pollution control and remediation professionals.
- Government regulators and environmental inspectors.
- Researchers and academics in the field of environmental science and geophysics.

## Program Outlines:

### Unit 1:

#### Introduction to Environmental Pollution Assessment with GPR and Syscal R2:

- Overview of environmental pollution sources and impacts.
- Introduction to Ground Penetrating Radar GPR technology.

- Understanding the functionalities and applications of Syscal R2.
- Importance of environmental assessments in pollution mitigation.
- Case studies illustrating the effectiveness of GPR and Syscal R2 in pollution detection.

## Unit 2:

### Principles of Ground Penetrating Radar GPR:

- Basic principles and operation of GPR.
- Interpretation of GPR data for pollution assessment.
- Factors influencing GPR data accuracy and resolution.
- Fieldwork techniques and data collection strategies.
- Hands-on exercises for GPR data processing and analysis.

## Unit 3:

### Application of Syscal R2 in Environmental Pollution Mapping:

- Overview of Syscal R2 instrumentation and capabilities.
- Mapping subsurface pollution using electrical resistivity imaging.
- Integration of Syscal R2 data with GPR for comprehensive pollution assessment.
- Data interpretation methodologies for pollution hotspot identification.
- Case studies demonstrating successful pollution mapping using Syscal R2.

## Unit 4:

### Field Techniques for Environmental Pollution Surveys:

- Planning and executing field surveys for pollution assessment.
- Utilization of GPR and Syscal R2 in field data collection.
- Best practices for site characterization and sampling.
- Real-time data acquisition and quality control measures.
- Safety protocols and environmental regulations compliance during fieldwork.

## Unit 5:

### Data Analysis and Reporting in Environmental Pollution Studies:

- Data processing techniques for GPR and Syscal R2 datasets.
- Integration of geophysical data with environmental monitoring data.
- Statistical analysis and interpretation of pollution assessment results.
- Preparation of comprehensive reports and presentations.
- Communication of findings to stakeholders and decision-makers.