Training Course on GIS in Disaster Risk Management

Professional Development Training Course Outline

Category	GIS	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

INTRODUCTION

Geographic Information Systems (GIS) have revolutionized disaster risk management (DRM) by providing powerful tools to assess, visualize, and respond to disaster risks. The GIS for Disaster Risk Management training course is designed to equip professionals with the skills to leverage GIS technology for effective disaster preparedness, response, recovery, and mitigation. As climate change accelerates and natural hazards increase, GIS is becoming an essential tool for mapping and analyzing disaster risks in real-time.

GIS enables the collection, management, and analysis of spatial data, helping to identify disaster-prone areas, plan for emergency responses, and optimize recovery efforts. This course explores how GIS can be integrated into DRM practices, providing hands-on experience with GIS tools and techniques tailored to disaster management scenarios. Participants will learn how GIS supports informed decision-making at every stage of disaster risk management.

By examining global case studies and practical applications, the training demonstrates how GIS can be used to track hazards, predict disaster impacts, and optimize resource distribution. Participants will explore the latest GIS technologies, from remote sensing to spatial analysis, and understand how these tools help build disaster-resilient communities.

Designed for disaster managers, urban planners, government officials, and humanitarian professionals, this course offers an invaluable opportunity to gain proficiency in GIS and its application to DRM. Enhance your disaster risk management capacity with GIS and make informed decisions that can save lives and reduce risks in disaster-prone areas.

Programme Curriculum

Training Course on GIS in Disaster Risk Management

Introduction

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Course Duration

5 Days

Course Objectives

1. Understand the role of GIS in disaster risk management.
2. Learn the basics of GIS technology and software used in DRM.
3. Master spatial data collection and management for disaster scenarios.
4. Analyze hazard maps to identify vulnerable areas.
5. Gain expertise in using GIS for risk assessment and impact prediction.
6. Learn to create and interpret GIS-based disaster preparedness plans.
7. Understand how to use GIS for response coordination and resource allocation.
8. Develop strategies for using GIS in disaster recovery and mitigation.
9. Explore case studies of successful GIS applications in disaster management.
10. Acquire skills in GIS mapping and visualization techniques for DRM.

Organizational Benefits

1. Enhance their disaster risk management capacity through GIS integration.
2. Improve decision-making processes using spatial data and analysis.
3. Build disaster-resilient infrastructure with data-driven insights.
4. Optimize resource allocation during disaster response and recovery.
5. Strengthen their ability to assess and predict disaster impacts.
6. Support evidence-based policy-making with GIS-powered analysis.
7. Foster inter-agency coordination through shared GIS platforms.
8. Promote efficiency and cost-effectiveness in disaster planning and response.
9. Provide staff with the latest GIS tools and techniques in disaster management.
10. Demonstrate organizational commitment to disaster preparedness and resilience.

Target Participants

- Disaster risk managers and response teams
- GIS professionals in emergency management
- Urban and regional planners
- Government officials in disaster management and planning
- Humanitarian aid workers
- Environmental scientists and climate change analysts
- Infrastructure and construction engineers
- Academicians and researchers in disaster management and GIS
- Policy-makers in disaster risk reduction
- Non-governmental organizations (NGOs) working in disaster recovery.

Course Outline

Module 1: Introduction to GIS and Disaster Risk Management

1. Basics of GIS technology and software for DRM.
2. Key concepts in disaster risk management and GIS integration.
3. The role of spatial data in disaster risk reduction.
4. Introduction to hazard mapping and risk analysis using GIS.
5. Case Study: GIS applications in flood management.

Module 2: Data Collection and Management for DRM

1. Types of spatial data and sources used in DRM.
2. Data collection techniques: remote sensing, GPS, and field surveys.
3. Managing and organizing GIS data for disaster response.
4. Importance of data quality and accuracy in disaster mapping.
5. Case Study: GIS-based landslide hazard assessment.

Module 3: Hazard Mapping and Vulnerability Assessment

1. Mapping natural hazards (floods, earthquakes, wildfires, etc.).

2. Vulnerability assessment using GIS tools and techniques.
3. Combining hazard, vulnerability, and exposure data for risk analysis.
4. Creating disaster-prone area maps for preparedness planning.
5. Case Study: Risk mapping for tsunami-prone coastal regions.

Module 4: GIS for Disaster Preparedness and Response

1. Designing GIS-based early warning systems for disasters.
2. Using GIS to plan evacuation routes and shelter locations.
3. Resource allocation and management through GIS in emergencies.
4. Role of GIS in real-time disaster monitoring and reporting.
5. Case Study: GIS for earthquake preparedness.

Module 5: GIS for Post-Disaster Recovery and Mitigation

1. Using GIS to assess post-disaster damage and losses.
2. GIS tools for recovery planning and infrastructure rebuilding.
3. Risk mitigation strategies for disaster-prone areas.
4. Visualizing recovery progress and impact using GIS.
5. Case Study: Post-hurricane recovery efforts using GIS.

Module 6: Advanced GIS Applications and Future Trends in DRM

1. The future of GIS in climate change adaptation and DRM.
2. Integrating GIS with other technologies: drones, AI, and big data.
3. GIS for community-based disaster risk management.
4. Challenges and opportunities in GIS adoption for DRM.
5. Case Study: Smart city disaster management with GIS.

Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

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