Nature-Based Infrastructure Solutions Training Course

Professional Development Training Course Outline

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

Course Introduction

The Nature-Based Infrastructure Solutions (NBIS) Training Course is a comprehensive professional development program designed to equip professionals with advanced knowledge and practical skills to design, implement, and manage climate-resilient, sustainable, and ecosystem-based infrastructure systems. The course focuses on integrating green infrastructure, ecosystem restoration, climate adaptation, biodiversity conservation, nature-positive development, and sustainable urban planning to address global challenges such as climate change, flooding, water scarcity, urbanization, and environmental degradation. Through practical frameworks, innovative tools, and global best practices, participants will learn how nature-based solutions (NbS) can complement traditional infrastructure while delivering economic, social, and environmental benefits.

This training program explores cutting-edge approaches in blue-green infrastructure, resilient landscapes, ecosystem services, regenerative design, carbon-neutral development, disaster risk reduction, and sustainable infrastructure financing. Participants will analyze successful international case studies and gain actionable strategies for developing nature-based projects that enhance community resilience, restore ecosystems, improve livelihoods, and support the achievement of UN Sustainable Development Goals (SDGs), climate commitments, and biodiversity targets. The course promotes collaborative learning, applied innovation, and transformative solutions for a sustainable future.

Programme Curriculum

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Course Objectives

By the end of the Nature-Based Infrastructure Solutions Training Course, participants will be able to:

1. Understand the principles, concepts, and global trends of Nature-Based Solutions (NbS) and ecosystem-based infrastructure.
2. Apply climate resilience strategies for infrastructure planning and environmental risk reduction.
3. Design and evaluate green infrastructure and blue-green networks for urban and rural environments.
4. Develop integrated approaches combining engineering solutions and ecological systems.
5. Analyze ecosystem services and their role in sustainable development and climate adaptation.
6. Implement nature-positive infrastructure projects using international standards and frameworks.
7. Assess climate risks using environmental data, GIS tools, and resilience assessment methods.
8. Integrate biodiversity conservation and ecological restoration into infrastructure planning.
9. Develop innovative approaches for urban resilience, smart cities, and sustainable communities.
10. Identify financing mechanisms for green investments, climate funds, and sustainable infrastructure projects.
11. Evaluate social, economic, and environmental benefits of nature-based infrastructure.
12. Apply monitoring, evaluation, and impact measurement techniques for NbS projects.
13. Build leadership capacity for implementing future-ready, low-carbon, and regenerative infrastructure solutions.

Target Audience

1. Environmental managers and sustainability professionals
2. Civil engineers, architects, and infrastructure planners
3. Urban planners and smart city development specialists
4. Government officials and policymakers
5. Climate change adaptation and disaster risk reduction experts
6. NGOs, conservation organizations, and development practitioners
7. Researchers, academics, and environmental consultants
8. Private sector professionals involved in green investment and infrastructure development

Course Modules

Module 1: Fundamentals of Nature-Based Infrastructure Solutions

- Introduction to Nature-Based Solutions (NbS) and ecosystem-based approaches
- Principles of sustainable and resilient infrastructure development
- Relationship between biodiversity, ecosystems, and human well-being
- Global policies including SDGs, climate agreements, and biodiversity frameworks
- Emerging trends in nature-positive development
- Case Study: Singapore ABC Waters Programme

Module 2: Climate Resilience and Adaptation Through Nature-Based Solutions

- Climate vulnerability assessment and resilience planning
- Nature-based disaster risk reduction strategies
- Flood management through wetlands and restored rivers
- Coastal resilience using mangroves and natural barriers
- Climate adaptation planning for vulnerable communities
- Case Study: The Netherlands Room for the River Project

Module 3: Green Infrastructure and Urban Nature-Based Design

- Urban forests, green roofs, and ecological corridors
- Heat reduction strategies through urban greening
- Sustainable drainage systems (SuDS)
- Green public spaces and community resilience
- Planning nature-positive smart cities
- Case Study: New York City Green Infrastructure Program

Module 4: Ecosystem Restoration and Landscape Resilience

- Principles of ecological restoration
- Forest landscape restoration approaches
- Wetland rehabilitation strategies
- Watershed management and ecosystem recovery
- Landscape-level resilience planning
- Case Study: Loess Plateau Restoration Project, China

Module 5: Water Security and Blue Infrastructure Solutions

- Integrated water resource management
- Natural wastewater treatment systems
- River restoration and watershed protection
- Rainwater harvesting and water-sensitive design
- Blue infrastructure planning approaches
- Case Study: Copenhagen Cloudburst Management Plan

Module 6: Biodiversity, Carbon Management, and Nature-Positive Development

- Biodiversity enhancement strategies
- Carbon sequestration through ecosystems
- Nature-positive development principles

- Habitat restoration and conservation planning
- Measuring ecological performance
- Case Study: Costa Rica Payment for Ecosystem Services Program.

Module 7: Financing, Governance, and Implementation of NbS Projects

- Green finance and climate investment mechanisms
- Public-private partnerships for NbS
- Governance models and stakeholder engagement
- Project planning and implementation frameworks
- Policy integration for sustainable infrastructure
- Case Study: The Great Green Wall Initiative, Africa

Module 8: Monitoring, Innovation, and Future Trends in Nature-Based Infrastructure

- Monitoring and evaluation frameworks
- GIS, remote sensing, and digital environmental tools
- Artificial intelligence applications in ecosystem planning
- Nature-based infrastructure performance indicators
- Future trends in regenerative and resilient development
- Case Study: European Union Nature-Based Solutions Demonstration Projects

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

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