Eco-Friendly Construction Techniques Training Course

Professional Development Training Course Outline

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

Course Introduction

Eco-Friendly Construction Techniques Training Course is designed to equip learners with advanced knowledge and practical skills in sustainable building design, green construction materials, energy-efficient architecture, and low-carbon infrastructure development. As the global construction industry shifts toward net-zero buildings, climate-resilient infrastructure, and circular economy practices, this course prepares professionals to meet modern environmental standards while maintaining structural efficiency, cost-effectiveness, and regulatory compliance.

This training emphasizes cutting-edge green building technologies, LEED certification principles, carbon footprint reduction strategies, renewable energy integration in construction, and sustainable urban development models. Participants will gain hands-on exposure to eco-friendly construction methodologies that reduce environmental impact, optimize resource utilization, and promote long-term sustainability in both residential and commercial projects.

Programme Curriculum

Eco-Friendly Construction Techniques Training Course

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5 days

Course Objectives

1. Understand principles of sustainable construction and green building design
2. Apply net-zero energy building concepts in modern construction projects
3. Identify and utilize eco-friendly and recycled construction materials
4. Implement energy-efficient building systems and smart technologies
5. Reduce carbon footprint in construction lifecycle management
6. Integrate renewable energy solutions (solar, wind, geothermal) into buildings
7. Master LEED certification requirements and green rating systems
8. Develop skills in water conservation and rainwater harvesting systems
9. Design buildings using passive cooling and natural ventilation techniques
10. Apply waste management and circular economy principles in construction
11. Enhance knowledge of climate-resilient infrastructure development
12. Use Building Information Modeling (BIM) for sustainable planning
13. Promote eco-smart urban development and sustainable city planning

Target Audience

1. Civil Engineers and Structural Engineers
2. Architects and Urban Planners
3. Construction Project Managers
4. Sustainability and Environmental Consultants
5. Real Estate Developers
6. Government Infrastructure Officers
7. Engineering and Architecture Students
8. Facilities and Property Management Professionals

Course Modules

Module 1: Foundations of Sustainable Construction

- Principles of green building design
- Environmental impact assessment basics
- Sustainable development goals (SDGs) integration
- Life-cycle assessment of materials
- Introduction to eco-certification systems
- **Case Study:** LEED-certified office building reducing energy consumption by 40%

Module 2: Eco-Friendly Building Materials

- Recycled and renewable materials usage
- Bamboo, hempcrete, and engineered wood applications

- Low-VOC paints and coatings
- Thermal insulation innovations
- Sustainable sourcing practices
- **Case Study:** Bamboo housing project reducing construction costs and emissions

Module 3: Energy-Efficient Building Systems

- Smart HVAC systems
- LED and energy-saving lighting design
- Building automation systems
- Energy modeling and simulation
- Passive solar design integration
- **Case Study:** Net-zero residential complex powered by solar integration

Module 4: Water Conservation Techniques

- Rainwater harvesting systems
- Greywater recycling systems
- Water-efficient plumbing design
- Smart irrigation systems
- Sustainable drainage solutions
- **Case Study:** Commercial building achieving 60% water reuse efficiency

Module 5: Renewable Energy Integration

- Solar photovoltaic systems in buildings
- Wind energy applications in infrastructure
- Geothermal heating and cooling
- Hybrid energy systems
- Energy storage solutions
- **Case Study:** University campus powered entirely by renewable microgrid

Module 6: Waste Management & Circular Construction

- Construction waste reduction strategies
- Material reuse and recycling systems
- Zero-waste construction planning
- Demolition waste recovery
- Circular economy implementation
- **Case Study:** Urban redevelopment project achieving 90% material recycling

Module 7: Green Building Certifications & Compliance

- LEED certification process
- BREEAM and EDGE standards
- Environmental compliance regulations
- Documentation and auditing practices
- Sustainable rating systems comparison
- **Case Study:** Commercial tower achieving LEED Platinum certification

Module 8: Smart & Climate-Resilient Infrastructure

- Climate-adaptive building design
- Disaster-resistant construction methods
- Smart city integration concepts
- IoT in sustainable infrastructure
- Future-ready urban planning
- **Case Study:** Flood-resistant smart housing community in coastal region

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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