Circular Construction Systems 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

Circular Construction Systems Training Course is designed to equip professionals with cutting-edge knowledge in sustainable construction, circular economy principles, zero-waste building design, and regenerative infrastructure systems. As the global construction industry shifts toward net-zero emissions, material efficiency, and lifecycle-based design, this course delivers practical and strategic competencies required to transition from linear “take–make–dispose” models to innovative closed-loop construction ecosystems. Participants will explore advanced concepts such as material reuse, urban mining, modular construction, green building certification systems, and low-carbon construction technologies.

This training integrates global best practices, emerging digital tools, and real-world applications to enable participants to design and manage resource-efficient, climate-resilient, and cost-effective construction projects. Through hands-on learning, case-based analysis, and systems thinking approaches, learners will gain the ability to implement circular design frameworks, life cycle assessment (LCA), and sustainable procurement strategies. The course supports professionals in aligning with global standards such as LEED, BREEAM, EDGE certification, ESG compliance, and sustainable development goals (SDGs), making it ideal for the evolving green economy.

Programme Curriculum

Circular Construction Systems Training Course

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Course Duration

5 days

Course Objectives

1. Master Circular Economy in Construction Systems
2. Apply Zero-Waste Construction Strategies
3. Understand Lifecycle Assessment (LCA) in Building Projects
4. Implement Green Building Certification Standards (LEED, BREEAM, EDGE)
5. Design Regenerative and Climate-Resilient Infrastructure
6. Optimize Construction Material Reuse and Urban Mining
7. Integrate Sustainable Procurement and Supply Chain Systems
8. Apply Carbon-Neutral Construction Techniques
9. Develop Modular and Prefabricated Construction Solutions
10. Utilize Digital Twin Technology in Construction Planning
11. Improve Resource Efficiency and Waste Minimization
12. Align projects with ESG and SDG Frameworks
13. Lead Sustainable Transformation in Construction Industries

Target Audience

1. Civil Engineers and Structural Engineers
2. Architects and Urban Designers
3. Construction Project Managers
4. Sustainability and ESG Consultants
5. Government Infrastructure Planners
6. Real Estate Developers
7. Environmental Engineers
8. Quantity Surveyors and Cost Estimators

Course Modules

Module 1: Introduction to Circular Construction Systems

- Principles of circular economy in construction
- Linear vs circular building models
- Global sustainability frameworks (SDGs, ESG)
- Material lifecycle thinking

- Circular design principles
- **Case Study:** Amsterdam Circular City Strategy – urban material reuse model

Module 2: Sustainable Building Materials & Innovation

- Low-carbon construction materials
- Recycled aggregates and bio-based materials
- Material lifecycle optimization
- Eco-material certification systems
- Innovations in green materials
- **Case Study:** Concrete recycling innovation in Switzerland infrastructure projects

Module 3: Zero-Waste Construction Practices

- Waste hierarchy in construction
- On-site waste segregation systems
- Construction and demolition (C&D) waste management
- Lean construction principles
- Circular demolition strategies
- **Case Study:** Japan’s high-efficiency construction waste recovery system

Module 4: Life Cycle Assessment (LCA) & Carbon Accounting

- LCA methodology in construction
- Embodied carbon analysis
- Carbon footprint measurement tools
- Environmental impact evaluation
- Data-driven sustainability reporting
- **Case Study:** UK net-zero school building LCA implementation

Module 5: Green Building Certification Systems

- LEED, BREEAM, EDGE frameworks
- Certification documentation processes
- Energy efficiency benchmarks
- Indoor environmental quality standards
- Compliance strategies
- **Case Study:** Singapore Green Mark certified smart building project

Module 6: Digital Construction & Smart Technologies

- Building Information Modeling (BIM)
- Digital twins in construction lifecycle
- AI in construction optimization
- IoT-based smart monitoring systems
- Automation in sustainable construction
- **Case Study:** Dubai smart city digital twin infrastructure system

Module 7: Circular Procurement & Supply Chain Management

- Sustainable procurement policies
- Circular supply chain models

- Ethical sourcing of materials
- Supplier sustainability evaluation
- Logistics optimization for low carbon footprint
- **Case Study:** IKEA circular supply chain transformation model

Module 8: Regenerative Urban Infrastructure Design

- Climate-resilient urban planning
- Nature-based solutions in construction
- Water-sensitive urban design
- Energy-positive building systems
- Regenerative city frameworks
- **Case Study:** Copenhagen carbon-neutral urban district development

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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Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com