Green Building and Sustainable Construction Safety Training Course



23 - 27 Nov 2026

Cape town

4600 € (Per Person)

Ref: #HSE7973_276719

Course Introduction / Overview:

This comprehensive training course provides a critical examination of the intersection between green building standards and sustainable construction safety. In an era where environmental responsibility is paramount, the construction industry is rapidly evolving to adopt sustainable practices. This program, offered by BIG BEN Training Center, is meticulously designed to equip professionals with the dual expertise required to lead this transformation. We will delve into internationally recognized green building rating systems such as LEED and BREEAM, exploring their core principles and practical application. Drawing on the foundational work of experts like Charles J. Kibert, author of "Sustainable Construction: Green Building Design and Delivery," the course moves beyond theory to address the real-world challenges of implementation. Participants will learn to integrate sustainable material selection, energy efficiency, and water conservation with robust health and safety protocols tailored for green construction sites. This includes managing the unique risks associated with new technologies and materials. The curriculum is structured to provide a holistic understanding, ensuring that projects are not only environmentally sound and economically viable but also fundamentally safe for all workers and future occupants, establishing a new benchmark for excellence in the industry.

Target Audience / This training course is suitable for:

- Architects and Design Professionals.
- Civil and Structural Engineers.
- Construction Project Managers.
- Health, Safety, and Environment (HSE) Officers.
- Sustainability Consultants and Managers.
- Real Estate Developers and Property Managers.
- Facility Managers.
- Urban Planners and Policy Makers.
- Government Officials in Public Works and Environmental Agencies.
- Procurement and Supply Chain Managers in the construction sector.

Target Sectors and Industries:

- Construction and Engineering.
- Real Estate Development.
- Architecture and Urban Planning.
- Environmental Consulting Services.
- Governmental bodies and public works agencies.
- Renewable Energy Sector.
- Manufacturing of Building Materials.
- Facility Management and Operations.

Target Organizations Departments:

- Project Management Office (PMO).
- Health, Safety, and Environment (HSE).
- Engineering and Design.
- Sustainability and Corporate Social Responsibility (CSR).
- Operations and Construction Management.
- Procurement and Contracts.
- Facilities Management.
- Planning and Development.
- Quality Assurance and Control.

Course Offerings:

By the end of this course, the participants will have able to:

- Analyze the principles and requirements of major green building standards like LEED and BREEAM.
- Identify and mitigate unique safety hazards associated with sustainable construction materials and methods.
- Develop and implement an effective construction waste management plan.
- Evaluate building materials based on their life cycle assessment (LCA) and environmental impact.
- Integrate energy efficiency and renewable energy systems into building design and construction safely.
- Formulate strategies for water conservation and efficient water use on construction sites.
- Conduct risk assessments specific to green building projects.
- Ensure compliance with environmental regulations and construction safety laws.
- Manage the procurement of sustainable materials and services effectively.
- Lead projects that achieve both high sustainability ratings and exemplary safety records.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be immersive, interactive, and highly practical. We believe that adult learning is most effective when it combines theoretical knowledge with hands-on application. This course utilizes a blended approach, featuring expert-led presentations that break down complex concepts like the WELL Building Standard and passive design strategies into understandable modules. These sessions are complemented by interactive group discussions and workshops, allowing participants to share experiences and problem-solve in a collaborative environment. A cornerstone of our method is the extensive use of real-world case studies, analyzing both successful green building projects and instances where safety was compromised. Participants will engage in practical exercises, such as conducting a mock safety audit for a sustainable construction site or evaluating a material's life cycle assessment. Team-based activities will challenge participants to develop integrated safety and sustainability plans for hypothetical projects. Continuous feedback from the instructor ensures that learning is reinforced, and individual questions are addressed, creating a dynamic and supportive educational environment that fosters deep understanding and practical skill mastery.

Course Agenda (Course Units):

Unit One: Foundations of Sustainable Construction and Green Building

- Introduction to Green Building Principles.
- History and Evolution of the Sustainability Movement in Construction.
- Understanding Key Rating Systems: LEED, BREEAM, and WELL.
- The Triple Bottom Line: People, Planet, and Profit.
- Core Concepts of Integrated Design Process.
- Global Environmental Challenges and the Role of the Built Environment.
- Regulatory Frameworks and Green Building Codes.

Unit Two: Sustainable Materials and Resource Efficiency

- Life Cycle Assessment (LCA) of Building Materials.
- Criteria for Selecting Sustainable and Eco-Friendly Materials.
- Strategies for Construction Waste Reduction and Management.
- Techniques for Water Conservation and Management on Site.
- Sourcing Local and Recycled Content Materials.
- Understanding Environmental Product Declarations (EPDs).
- Circular Economy Principles in Construction.

Unit Three: Health and Safety in Green Construction Projects

- Identifying Unique Hazards on Sustainable Construction Sites.
- Safety Protocols for Installing Renewable Energy Systems (Solar, Geothermal).
- Managing Risks Associated with Green Roofs and Living Walls.
- Handling and Disposing of Non-Traditional and Recycled Materials.
- Ensuring High Indoor Environmental Quality (IEQ) During and After Construction.
- Developing a Site-Specific Health and Safety (HSE) Plan for Green Projects.
- Ergonomics and Worker Wellbeing in Sustainable Building Practices.

Unit Four: Energy, Water, and Environmental Systems

- Principles of Passive Solar Design and Natural Ventilation.
- Building Envelope Performance and Thermal Bridging.
- High-Efficiency HVAC and Lighting Systems.
- Integration of Renewable Energy Technologies.
- Advanced Water Harvesting and Greywater Recycling Systems.
- Building Information Modeling (BIM) for Sustainability Analysis.
- Commissioning and Performance Verification of Green Buildings.

Unit Five: Sustainable Project Management and Future Trends

- Integrating Sustainability Goals into Project Planning and Execution.
- Green Procurement and Sustainable Supply Chain Management.
- Cost-Benefit Analysis of Green Building Features.
- The Future of Construction: Net-Zero Buildings and Carbon Neutrality.
- Climate Resilience and Adaptive Building Design.
- Community Engagement and Social Equity in Green Projects.
- Final Project: Developing an Integrated Green Building and Safety Strategy.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

As we push the boundaries of material science for sustainability, how do we proactively develop safety protocols for materials whose long-term health impacts are not yet fully understood?

What unique qualities does this course offer compared to other courses?

This course distinguishes itself by uniquely integrating two critical yet often siloed disciplines: advanced green building standards and rigorous construction safety management. While many programs focus on either sustainability or safety, this curriculum is built on the premise that a truly successful project excels in both. We move beyond a theoretical overview of rating systems like LEED and BREEAM to a practical, risk-based analysis of their on-site implementation. The course content addresses the nuanced safety challenges that arise directly from sustainable practices, such as handling innovative recycled materials or installing complex renewable energy systems. By focusing on the direct intersection of these fields, participants gain a holistic and forward-thinking skill set that is increasingly demanded by the industry. The methodology emphasizes case studies of real-world projects, enabling participants to learn from both pioneering successes and cautionary failures. This approach ensures that graduates are not just knowledgeable about green principles but are also fully equipped to lead safe, compliant, and truly sustainable construction projects from conception to completion.