



Fundamentals of Sustainable and Green Building Practices Training Course

Ref: #CON9371



Course Introduction / Overview:

This training course is designed to equip construction professionals, architects, and engineers with the strategic and technical skills needed to master sustainable and green building practices. As the global focus shifts toward environmental responsibility, the ability to design, construct, and manage sustainable projects is becoming a critical driver for competitive advantage. This program, offered by BIG BEN Training Center, provides a comprehensive framework for understanding the core principles of green building, from various sustainable materials and energy efficiency strategies to site selection and waste management. We will explore key concepts such as LEED certification, zero-net energy buildings, and the use of renewable energy sources. The curriculum is informed by the academic work of authors like Charles J. Kibert, whose book, *Sustainable Construction: Green Building Design and Delivery*, provides a foundational and detailed understanding of the principles behind a successful green building project. This course goes beyond a simple overview of green concepts to provide a deep understanding of how to implement real-world solutions that ensure environmental performance, operational efficiency, and long-term value. We prepare participants to be leaders who can build more efficient and innovative sustainable initiatives.

Target Audience / This training course is suitable for:



- Architects and designers.
- Civil and environmental engineers.
- Construction project managers.
- Real estate developers.
- Facilities managers.
- Urban planners.
- Compliance officers.
- Government agencies and equivalents.

Target Sectors and Industries:

- Construction.
- Real Estate Development.
- Architecture and Engineering.
- Energy and Utilities.
- Urban Planning.
- Environmental Consulting.
- Building Materials.
- Government and public administration agencies.

Target Organizations Departments:

- Project Management Office (PMO).
- Strategic Planning.
- Design and Engineering.
- Operations and Maintenance.
- Quality Assurance.
- Environmental, Health, and Safety (EHS).
- Procurement.
- Finance.



Course Offerings:

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

- Apply core sustainable building practices.
- Implement energy efficiency and water conservation strategies.
- Select and use green building materials.
- Navigate green building certification systems like LEED.
- Perform a lifecycle assessment of a building.
- Develop effective waste management plans.
- Utilize renewable energy sources in projects.
- Measure and report on project sustainability.

Course Methodology:

This training course uses a highly practical and case-study driven methodology. The program is built on real-world examples of successful sustainable building projects from around the world. Participants will work in teams to develop a complete sustainability plan for a hypothetical green building, applying the tools and frameworks learned in the course. We will use interactive workshops to practice skills like material selection and energy modeling. The curriculum is designed to be a collaborative experience where participants can share their unique challenges and innovative solutions. Our trainers, with extensive experience in the field, will provide direct feedback and guidance throughout the course. BIG BEN Training Center is committed to providing a dynamic and practical learning environment, ensuring that participants leave with the skills and confidence to effectively manage green building projects.



Course Agenda (Course Units):

Unit One: Foundations of Sustainable Construction

- The business case for green building.
- Key principles of sustainable design.
- Understanding the project lifecycle.
- Environmental impact of construction.
- Waste management and reduction.
- Case studies in sustainable initiatives.
- The role of green building certification.

Unit Two: Sustainable Site and Water Management

- Sustainable site selection.
- Minimizing site disturbance.
- Stormwater management.
- Water conservation strategies.
- Greywater and rainwater harvesting.
- Designing for water efficiency.
- Protecting natural habitats.

Unit Three: Energy and Atmosphere

- Introduction to energy efficiency.
- Renewable energy sources: solar, wind.
- Understanding building envelopes.
- Heating, Ventilation, and Air Conditioning (HVAC) systems.
- Energy modeling and audits.
- The concept of a zero-net energy building.
- Commissioning and performance verification.



Unit Four: Materials and Resources

- The importance of sustainable materials.
- Recycled and regional materials.
- Lifecycle assessment of products.
- Waste management planning.
- Construction and demolition waste.
- Material reuse and recycling.
- Selecting low-impact materials.

Unit Five: Indoor Environmental Quality and Innovation

- Understanding indoor environmental quality.
- Improving indoor air quality.
- Thermal comfort and daylighting.
- Acoustic performance.
- The role of innovation in green buildings.
- Strategic leadership for sustainability.
- The future of sustainable construction.

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:



How can a deeper understanding of sustainable and green building practices and a proactive approach to resource efficiency empower construction professionals to move beyond traditional methods and become strategic leaders in creating projects that not only meet today's demands but also contribute to a healthier planet for future generations?

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

This training course is unique because it provides a dedicated, strategic focus on sustainable and green building practices. While other programs may cover general project management, our curriculum is designed to empower professionals with the specific skills needed to address the unique challenges of a sustainable project, from navigating LEED certification to selecting the right green building materials. The program is a hands-on experience, with exercises that directly simulate the challenges and decisions involved in a real-world sustainability plan. We go beyond theoretical concepts to provide a clear, actionable roadmap for balancing the demands of a complex project with the imperative of delivering a successful project that is environmentally responsible. This course is for professionals who want to lead their organizations toward a more efficient, profitable, and innovative future.