Sustainable IT and Green Technology Operations Training Course



30 Nov - 04 Dec 2026

Cape town

4600 € (Per Person)

Ref: #IT5695_287675

Course Introduction / Overview:

This course provides a comprehensive exploration of Green IT and sustainable technology operations, a critical discipline for modern organizations aiming to balance technological advancement with environmental responsibility. As businesses face increasing pressure to reduce their carbon footprint and comply with environmental regulations, the role of IT in sustainability has become paramount. This program moves beyond theoretical concepts to offer practical, actionable strategies for implementing green initiatives across the entire IT lifecycle. Participants will delve into key areas such as energy-efficient data centers, sustainable procurement, e-waste management, and the principles of green software engineering. Drawing on insights from thought leaders like Bill Tomlinson, author of "Greening through IT", the course emphasizes a holistic approach. BIG BEN Training Center has designed this curriculum to empower professionals to lead their organizations in developing and executing a robust sustainable IT strategy, turning environmental obligations into opportunities for innovation, cost savings, and enhanced corporate reputation. This training is essential for any professional looking to integrate sustainability into their core IT operations and contribute meaningfully to their organization's ESG (Environmental, Social, and Governance) goals.

Target Audience / This training course is suitable for:

- IT Managers and Directors.
- Chief Information Officers (CIOs) and Chief Technology Officers (CTOs).
- Data Center Operations Managers.
- Sustainability and Corporate Social Responsibility (CSR) Officers.
- IT Procurement and Sourcing Specialists.
- Facilities Managers.
- ESG Analysts and Consultants.
- Operations Managers.
- IT Infrastructure and Network Architects.
- Compliance and Risk Management Professionals.

Target Sectors and Industries:

- Information Technology and Telecommunications.
- Banking, Finance, and Insurance Services.
- Healthcare and Pharmaceutical Industries.
- Manufacturing and Industrial Production.
- Governmental and Public Sector Agencies.
- Education and Research Institutions.
- Retail and Consumer Goods.
- Energy and Utilities.
- Consulting and Professional Services.

Target Organizations Departments:

- Information Technology (IT) Department.
- Sustainability and Corporate Responsibility Department.
- Operations and Logistics.
- Procurement and Supply Chain Management.
- Facilities Management.
- Corporate Strategy and Planning.
- Finance and Asset Management.
- Risk Management and Compliance.
- Research and Development (R&D).

Course Offerings:

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

- Develop a comprehensive Green IT strategy aligned with organizational goals.
- Analyze and reduce the energy consumption of data centers and IT infrastructure.
- Implement sustainable IT procurement policies and practices.
- Establish a responsible IT asset disposition (ITAD) and e-waste management program.
- Evaluate and optimize the carbon footprint of IT operations.
- Integrate sustainability principles into software development and digital services.
- Measure, monitor, and report on IT sustainability metrics for ESG compliance.
- Promote a culture of environmental responsibility within the IT department and the wider organization.
- Identify cost-saving opportunities through sustainable technology initiatives.
- Navigate the landscape of green IT standards, certifications, and regulations.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be highly interactive, practical, and engaging, ensuring that participants can immediately apply their learning in a real-world context. This course moves beyond traditional lectures by incorporating a dynamic blend of expert-led presentations, in-depth case study analyses of successful green IT implementations, and collaborative group workshops. Participants will work in teams to design a sustainable IT policy, simulate the calculation of an IT carbon footprint, and debate the merits of different green procurement strategies. Interactive sessions, Q&A panels, and peer-to-peer feedback are central to the learning experience, fostering a rich environment for knowledge sharing and problem-solving. We utilize a variety of learning aids, including practical checklists, strategy templates, and assessment tools. The focus is on experiential learning, empowering attendees not just with knowledge, but with the confidence and skills to lead sustainable change within their own organizations. This hands-on approach ensures a deep and lasting understanding of sustainable technology operations.

Course Agenda (Course Units):

Unit One: Foundations of Green IT and Sustainability

- Introduction to Green IT and Sustainable Computing.
- The Business Case for Green IT: ROI and Competitive Advantage.
- Understanding the Environmental Impact of Technology.
- Global Sustainability Goals and IT's Role.
- Key Green IT Frameworks, Standards, and Regulations (e.g., ISO 14001).
- Defining IT's Carbon Footprint and Key Metrics.
- Stakeholder Engagement for Sustainable IT Initiatives.

Unit Two: Energy-Efficient Data Centers and Infrastructure

- Principles of Green Data Center Design and Operation.
- Measuring and Optimizing Power Usage Effectiveness (PUE).
- Advanced Cooling Technologies and Strategies.
- Virtualization, Consolidation, and Server Optimization.
- The Role of Cloud Computing in Sustainability.
- Sustainable Network Architecture and Design.
- Renewable Energy Sources for IT Operations.

Unit Three: Sustainable IT Lifecycle Management

- Green Procurement: Sourcing Eco-Friendly Hardware and Services.
- Developing a Sustainable IT Procurement Policy.
- Strategies for Extending the Lifespan of IT Assets.
- Introduction to the Circular Economy in IT.
- Responsible IT Asset Disposition (ITAD).
- Managing E-waste: Compliance, Risks, and Best Practices.
- Sustainable Supply Chain Management for Technology.

Unit Four: Green Software and Sustainable Digital Practices

- Introduction to Sustainable Software Engineering (SSE).
- Principles of Green Coding and Application Optimization.
- Measuring the Energy Footprint of Software and Digital Services.
- Sustainable UI/UX Design Principles.
- The Environmental Impact of Data Storage and Management.
- Promoting Sustainable Digital Habits in the Workplace.
- The Role of AI and IoT in Environmental Sustainability.

Unit Five: Green IT Strategy, Governance, and Reporting

- Developing and Implementing a Corporate Green IT Strategy.
- Establishing a Green IT Governance Framework.
- Key Performance Indicators (KPIs) for IT Sustainability.
- Monitoring and Measuring Progress Towards Green Goals.
- Integrating IT Metrics into Corporate ESG Reporting.
- Communicating Sustainability Success to Stakeholders.
- Future Trends in Green IT and Sustainable Technology.

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 AI and machine learning models become more complex and computationally intensive, how can organizations balance the drive for technological innovation with the imperative for a sustainable and reduced digital carbon footprint?

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

This course distinguishes itself through its holistic and strategic approach to sustainable technology, moving far beyond a narrow focus on data center energy efficiency. While other programs may concentrate on technical fixes, this curriculum integrates the entire IT lifecycle, from green procurement and sustainable supply chains to responsible e-waste management and the principles of sustainable software engineering. It places a strong emphasis on governance and strategy, equipping participants not just with technical knowledge but with the leadership skills to develop, implement, and manage a comprehensive Green IT policy that aligns with corporate ESG objectives. The content is deeply practical, focusing on actionable frameworks, measurable KPIs, and effective reporting mechanisms that are crucial for demonstrating value and ensuring compliance. Furthermore, the course is forward-looking, addressing the environmental implications of emerging technologies like AI and IoT, ensuring participants are prepared for the future challenges and opportunities in the field of sustainable IT. It is designed for leaders who want to drive meaningful environmental change while unlocking operational efficiencies and enhancing their organization's reputation.