

## Training For IT Professionals

# Implementing, Maintaining and Optimizing Green Computing Technologies



**Course Code:** IMOGCT

**Course Overview:** This hands-on practical course (ISO/IEC 2382-36:2008 Compliant) will focus on the Implementation, Operations and Continual Improvement phases of the GCI Process Life-cycle. Course delegates will be formally introduced to the real-world concepts, principles and practices of Green Computing. This course leads to the [Certified Green Computing Professional](#) certification upon successful completion of the CGCP02 Exam.

**Course Objectives:** At the end of the course, delegates will have adequate knowledge and skills to implement, operate and optimize green computing technologies for small, medium and large IT infrastructures.

**Length:** 5 Days

**Language:** English

**Audience(s):** This course is intended for IT consultants, system integrators, vendors, systems engineers and network specialists who are responsible for implementing and troubleshooting green computing technologies for an organization.

**Delivery Method:** Instructor-led (classroom)

**Courseware:** Printed GCI Official Training Guide

**Pre-requisites:** 1 to 3 years in designing or deploying IT systems

**Course Outline:**

Module 1 - Introduction to Green Computing

1.1. Definition

1.2. Objectives

1.3. Common Terminology

- 1.4. Statistics
- 1.5. Research Assignment
- 1.6. Hands-On Assignment
- 1.7. Review

## Module 2 - Introduction to the Green Computing Lifecycle (GCL)

- 2.1. Mapping the Concepts of Green Computing To the GCL
- 2.2. How Does The GCL Work?
- 2.3. Research Assignment
- 2.4. Hands-On Assignment
- 2.5. Review

## Module 3 - Green Computing Technologies Primer

- 3.1. Data Center Energy Efficiency
- 3.2. Virtualization Techniques
- 3.3. Grid Computing
- 3.4. Cloud Computing
  - 3.4.1. Software as a Service (SaaS)
  - 3.4.2. Infrastructure as a Service (IaaS)
  - 3.4.3. Platform as a Service (PaaS)
- 3.5. Power Optimization Techniques
- 3.6. Research Assignment
- 3.7. Hands-On Assignment
- 3.8. Review

## Module 4 - Green Computing Standards & Legislation

- 4.1. ISO 14001
- 4.2. ISO 50001
- 4.3. Energy Star
- 4.4. EPEAT
- 4.5. Kyoto Protocol
- 4.6. Research Assignment
- 4.7. Hands-On Assignment
- 4.8. Review

## Module 5 - Implementing, Operating & Optimizing Virtualization Techniques

- 5.1. Implementing a VT Infrastructure
- 5.2. Managing a VT Infrastructure
- 5.3. Troubleshooting & Optimizing a VT Infrastructure
- 5.4. Research Assignment
- 5.5. Hands-On Assignment
- 5.6. Review

## Module 6 - Implementing, Operating & Optimizing Cloud Computing

- 6.1. Implementing a CC Infrastructure
- 6.2. Managing a CC Infrastructure
- 6.3. Troubleshooting & Optimizing a CC Infrastructure
- 6.4. Research Assignment
- 6.5. Hands-On Assignment

## 6.6. Review

### Module 7 - Implementing, Operating & Optimizing Grid Computing

- 7.1. Implementing a GC Infrastructure
- 7.2. Managing a GC Infrastructure
- 7.3. Troubleshooting & Optimizing a GC Infrastructure
- 7.4. Research Assignment
- 7.5. Hands-On Assignment
- 7.6. Review

### Module 8 - Implementing, Managing & Optimizing Data Center Energy Efficiency

- 8.1. Implementing a DCEE Infrastructure
- 8.2. Managing a DCEE Infrastructure
- 8.3. Troubleshooting & Optimizing a DCEE Infrastructure
- 8.4. Research Assignment
- 8.5. Hands-On Assignment
- 8.6. Review

### Module 9 - Implementing, Operating & Optimizing Power Optimization Techniques

- 9.1. Implementing a PO Infrastructure
- 9.2. Managing a PO Infrastructure
- 9.3. Troubleshooting & Optimizing a PO Infrastructure
- 9.4. Research Assignment
- 9.5. Hands-On Assignment
- 9.6. Review

