

## Green IT Foundation

**خلاصه :** فناوری اطلاعات سبز برای متخصصان فناوری اطلاعات در قرن بیست و یکم علمی کاربردی و در حال گسترش می باشد. سازمان هایی که به دنبال کاهش هزینه ها، افزایش اثربخشی و کاهش ردپای زیستمحیطی و مخصوصاً عملیاتی خود هستند می توانند از پارچوب فناوری اطلاعات و ارتباطات سبز استفاده کنند تا سازمان و پرسنل آن بهتر بتوانند خدمت رسانی کنند و تمامی هزینه های خود را مدیریت کرده و همچنین فرایندها رو باز طراحی کنند. اصول فناوری اطلاعات سبز با سیاستهای مسئولیت اجتماعی شرکت (CSR) و ابتکارهای کارآیی برای زنجیره تأمین و فعالیت های تجاری کل سازمان مطابقت و همسویی کامل دارد. فناوری اطلاعات سبز به عنوان "کاربرد اثربخش و ناب فناوری و IT هوشمند، انرژی بهینه و سازگار با محیط زیست در سراسر سازمان" تعریف شده است. برای مثال یکی از نموده های آن در مراکز داده سازمان می تواند باشد.

**مدت دوره:** ۱۶ ساعت

**پیش نیاز:** ندارد – آشنایی با مباحث فناوری اطلاعات

**مخاطب:** مدیران ارشد – مدیران و سرپرستان فناوری اطلاعات – مدیران توسعه پایدار و CSR

**سرفصل دوره:**

### 1. Understanding Green IT

- 1.1 Definition of Green IT 1.1.1 Define Green IT
- 1.1.2 Describe the key features of Green IT/sustainable computing
- 1.2 The SMART/GREEN ICT Framework
- 1.2.1 Recognize elements of the SMART/GREEN ICT Framework
- 1.2.2 Describe the benefits of the framework
- 1.3 Drivers and motivators for Green IT 1.3.1 Identify Internal drivers for Green IT
- 1.3.2 Identify External drivers for Green IT
- 1.3.3 Describe Carbon market mechanisms
- 1.4 Relationship between Corporate Social Responsibility (CSR) and Green IT 1.4.1 Name international Green [IT] organizations and initiatives.
- 1.4.2 Describe how Sustainable computing practices impact CSR
- 1.4.3 Describe the seven sins of Green washing (Green sheen)
- 1.4.4 Describe Triple bottom line (People Planet Profit)

## 2. Lifecycle Management

- 2.1 Acquisition of equipment, services, consumables
  - 2.1.1 Name methods to evaluate Green credentials of products and suppliers
  - 2.1.2 Describe methods to reduce ecological footprint when procuring IT assets
- 2.2 Operational use
  - 2.2.1 Identify IT assets energy consumption
  - 2.2.2 Describe methods to reduce IT asset power consumption/waste
  - 2.2.3 Describe methods to reduce the environmental impact of IT assets
  - 2.2.4 Describe methods to reduce the impact of, and wasteful consumption of workplace consumables
- 2.3 End of life
  - 2.3.1 Define e-waste
  - 2.3.2 Identify the potential negative impact of e-waste
  - 2.3.3 Describe methods for end of life management

## 3. Optimizing the Infrastructure

- 3.1 Demand Infrastructure
  - 3.1.1 Identify types of Virtualization
  - 3.1.2 Describe the Green benefits of Virtualization
  - 3.1.3 Describe greening enterprise data storage
  - 3.1.4 Describe the advantages of hosted data center services and Cloud computing as a potential more sustainable way of computing
- 3.2 Supply Infrastructure
  - 3.2.1 Identify elements of data center facility power supply chain
  - 3.2.2 Describe the basics of cooling systems and measures which can be taken to increase cooling systems efficiency
  - 3.2.3 Describe the benchmarks for the power usage efficiency of the data center and its cooling systems efficiency: Power Usage Effectiveness (PUE) index and Data Center Infrastructure Efficiency (DCiE) index

## 4. IT as Enabler

- 4.1 Virtual collaboration and e-working
  - 4.1.1 Describe the potential socio-environmental benefits of e-working and telecommuting
  - 4.1.2 Define the role of ICT in enabling e-working and telecommuting
  - 4.1.3 Describe the potential 'Green' benefits of collaboration technology
- 4.2 SMART business systems
  - 4.2.1 Describe the potential green benefits of Dematerialization
  - 4.2.2 Describe the role of ICT in the low carbon economy
  - 4.2.3 Define the concept of SMART solutions in reference to sustainable business practices
  - 4.2.4 Define ICT's role in supply chain optimization (BTO; Zero stock)

- 4.3 SMART workplace 4.3.1 Describe the concept of a SMART workplace
- 4.3.2 Define the role of ICT in building automation
- 4.3.3 Describe the role of ICT in the modernizing practices in the workplace

## **5. Governance and processes for Green IT**

### 5.1 Environmental governance and Green IT policy

#### 5.1.1 Describe the role of environmental governance

#### 5.1.2 Describe the main roles and functions involved in environmental governance

#### 5.1.3 Name the main components of a Green IT Policy

### 5.2 Green IT in relation to service management

#### 5.2.1 Define the role of service management in the alignment of Green IT and sustainable computing practices with organizational sustainability policies and goals

#### 5.2.2 Relate the service lifecycle approach to Green IT

#### 5.2.3 Describe the concept of an environmentally sustainable service strategy