

Subject Code	Subject Name	Credits
26CS109	GREEN COMPUTING	4

Course Objectives:

1. To learn the fundamentals of Green Computing.
2. To analyze the Green computing Grid Framework.
3. To understand the issues related with Green compliance.
4. To study and develop various case studies.

Learning Objectives:

On successful completion of the course, students will be able to:

1. To learn about green computing and its impact on the environment

Unit 1 - Fundamentals of Green IT (12 hrs.):

Business, IT, and the Environment – Green computing: scoop on power, carbon foot print– Green IT Strategies: Dimensions, Drivers, and Goals – Environmentally Responsible Business: Policies, Practices, and Metrics.

Unit 2 - Green Assets (12 hrs.):

Buildings, Data Centers, Networks, and Devices – Green Business Process Management: Modeling, Optimization, and Collaboration – Green Enterprise Architecture – Environmental Intelligence – Green Supply Chains – Green Information Systems: Design and Development Models

Unit 3 - Virtualization of IT Systems (12 hrs.):

Role of electric utilities, Telecommuting, teleconferencing and teleporting – Materials recycling – Best ways for Green PC – Green Data center – Green Grid framework

Unit 4 - Green IT (12 hrs.):

Socio-cultural aspects of Green IT – Green Enterprise Transformation Roadmap – Green Compliance: Protocols, Standards, and Audits – Emergent Carbon Issues: Technologies and Future.

Unit 5 - Case Study (12 hrs.):

The Environmentally Responsible Business Strategies (ERBS) – Case Study Scenarios for Trial Runs – Case Studies – Applying Green IT Strategies and Applications to a Home, Hospital, Packaging Industry and Telecom Sector.

Reference Books:

1. BhuvanUnhelkar, —Green IT Strategies and Applications-Using Environmental Intelligence, CRC Press, June 2014.
2. Woody Leonhard, Katherine Murray, —Green Home computing for dummies, August 2012.
3. Green Computing and Green IT Best Practice Jason Harris Emereo
4. Green Computing Tools and Techniques for Saving Energy, Money and Resources Bud E. Smith CRC Press 2014

