MCA 205 Environmental Studies and Green IT

Module 1 (10 Hours)

Environmental studies: Scope and importance of environmental studies, environment and its components, ecosystem, environmental pollution; Air, water, soil, Thermal, nuclear and solid waste management, e-waste management

Module 2 (10 Hours)

Winning with Green IT- Basic Green Concepts, Green and IT, IT Ecosystem, Why Green IT now, Do's and Don't of Green IT, Making business case for Green IT, Policies for change, balancing carbon Foot print, Standards and Metrics, Emerging standards with IT practices, reviewing Established and emerging Standards Assessing organization's current energy and needs, Understanding energy terms and terminology, Building Audit for energy requirement, policy based management, Efficiency factors, Carbon reduction options, putting a master plan for go green

Module 3 (10 Hours)

Greening the data center, foundation for Green data management, formalizing best practices for Green IT, Information life cycle management, Tired storage architecture, Going greener with Hosted Data Center Services, maximizing data center efficiency- proper site selection, consolidating physical infrastructure, usage of green servers, managing servers for energy efficiency, planning data center cooling factors- basics of cooling system, bench marking cooling system's efficiency , managing the storage system from green perspective, managing the network to become green

Module 4 (10 Hours)

Virtualization, understanding virtualization, building virtual infrastructure, enabling virtual, using energy efficient machines, desktop virtualization, usage of thin client, collaboration tools – text, voice, video, Video conference, Tele Presence

Paperless office, changing printing habits, using digital documents, evaluating green gadgetry, powering gadgets intelligently, greening the facility, lighting for less, landscaping in a sustainable way, Improving the indoor environment, recycling throughout the office, usage of renewable energy, safe disposal policy

Module 5 (6 Hours) (as per choice of faculty)

Portion covered can be tested through Internal evaluation only not to be included in University examination)

Text books and References

1. Green IT For Dummies; Carol Baroudi; Jeffrey Hill; Arnold Reinhold; JhanaSenxian Publisher: For Dummies

2. Green Cloud Computing and Risk Management by BabakAkhgar; Colin Pattinson; Mohammad Dastbaz Publisher : Morgan Kaufmann

3. Green Services engineering, Optimization, and Modeling in the Technological Age by Xiaodong Liu; Yang LiPublisher: IGI Global

4. Environmental Studies, Basak, Pearson