

COURSE CODE	COURSE TITLE	L	T	P	C
1152IT146	DATACENTER VIRTUALIZATION	3	0	0	3

UNIT I - DATA CENTER CHALLENGES

How server, desktop, network Virtualization and cloud computing reduce data center footprint, environmental impact and power requirements by driving server consolidation; Evolution of Data Centers: The evolution of computing infrastructures and architectures from standalone servers to rack optimized blade servers and unified computing systems (UCS).

UNIT II - ENTERPRISE-LEVEL VIRTUALIZATION

Provision, monitoring and management of a virtual datacenter and multiple enterprise-level virtual servers and virtual machines through software management interfaces; Networking and Storage in Enterprise Virtualized Environments - Connectivity to storage area and IP networks from within virtualized environments using industry standard protocols

UNIT III - VIRTUAL MACHINES & ACCESS CONTROL

Virtual machine deployment, modification, management; monitoring and migration methodologies.

UNIT IV - RESOURCE MONITORING

Physical and virtual machine memory, CPU management and abstraction techniques using a hypervisor.

UNIT V - VIRTUAL MACHINE DATA PROTECTION

Backup and recovery of virtual machines using data recovery techniques; Scalability - Scalability features within Enterprise virtualized environments using advanced management applications that enable clustering, distributed network switches for clustering, network and storage expansion; High Availability : Virtualization high availability and redundancy techniques.

TEXT / REFERENCES BOOKS

1. Mickey Iqbal 2010, IT Virtualization Best Practices: A Lean, Green Virtualized Data Center Approach, MC Press [ISBN: 978-1583473542]
2. Mike Laverick, VMware vSphere 4 Implementation [ISBN: 978-0071664523]
3. Jason W. McCarty, Scott Lowe, Matthew K. Johnson, VMware vSphere 4 Administration Instant Reference [ISBN: 978-0470520727]
4. Brian Perry, Chris Huss, Jeantet Fields, VCP VMware Certified Professional on vSphere 4 Study Guide [ISBN: 978-0470569610]
5. Brian Perry, Chris Huss, Jeantet Fields, VCP VMware Certified Professional on vSphere 4 Study Guide [ISBN: 978-0470569610]