

CLOUD SECURITY AND PRIVACY

(Program Elective-V)

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|--|-----------|---------------------------------|-------|----------------------|-----------------|
| CourseCode | 19IT4702B | Year | IV | Semester | I |
| CourseCategory | PE | Branch | IT | CourseType | Theory |
| Credits | 3 | L-T-P | 3-0-0 | Prerequisites | Cloud Computing |
| Continuous Internal Evaluation: | 30 | Semester End Evaluation: | 70 | Total Marks: | 100 |

| Course Outcomes | | Blooms Taxonomy Level |
|---|--|-----------------------|
| Upon successful completion of the course, the student will be able to | | |
| CO1 | Understand the basic components of cloud & Security in the cloud | L2 |
| CO2 | Illustrate the Infrastructure Security, Data Security, storage and security management in the cloud. | L3 |
| CO3 | Understand the concepts of Identity and Access Management | L2 |
| CO4 | Illustrate the privacy issues in could environment | L3 |

| Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (H:High, M:Medium, L:Low) | | | | | | | | | | | | | | |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 |
| CO1 | 3 | | | | | | | | | | | | 3 | |
| CO2 | 3 | | | | | | | | | | | | 3 | |
| CO3 | 3 | | | | | | | | | | | | 3 | |
| CO4 | 3 | | | | | | | | | | | | 3 | |

| Syllabus | | |
|-----------------|---|--------------------------|
| Unit No | Contents | Mapped CO |
| I | What Is Cloud Computing: Cloud Computing Defined, The SPI Framework for Cloud Computing, Relevant Technologies in Cloud Computing, The Traditional Software Model,The Cloud Services Delivery Model, Cloud Deployment Models, Key Drivers to Adopting the Cloud, The Impact of Cloud Computing on Users, Governance in the Cloud,Barriers to Cloud Computing Adoption in the Enterprise. | CO1 |
| II | Infrastructure Security: Infrastructure Security: The Network Level, Infrastructure Security: The Host Level, Infrastructure Security: The Application Level Data Security and Storage: Aspects of Data Security, Data Security Mitigation, Provider Data and Its Security | CO1 CO2 |
| III | Identity and Access Management: Trust Boundaries and IAM, Why IAM?,IAM Challenges, IAM Definitions, IAM Architecture and Practice, Getting Ready for the Cloud, Relevant IAM Standards and Protocols for Cloud Services, IAM Practices in the Cloud, Cloud Authorization Management, Cloud Service Provider IAM Practice | CO1 CO3 |
| IV | Security Management in the Cloud: Security Management Standards, Security Management in the Cloud Availability Management, SaaS Availability Management, PaaS Availability Management, IaaS Availability Management, Access Control, Security Vulnerability, Patch, and Configuration Management | CO1 CO2 |
| V | Privacy: What Is Privacy, What Is the Data Life Cycle, What Are the Key Privacy Concerns in the Cloud, Who Is Responsible for Protecting Privacy, Changes to Privacy Risk Management and Compliance in Relation to Cloud Computing, Legal and Regulatory Implications, U.S. Laws and Regulations, International Laws and Regulations | CO1 CO4 |

| Learning Resources |
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| TextBooks |
| 1. Tim Mather, Subra Kumaraswamy, Shahed Latif, “Cloud Security and Privacy: An Enterprise Perspective on Risks and Compliance”O'ReillyMedia;1edition[ISBN:0596802765],2009 |
| References |
| 1.Ronald L.Krutz,Russell Dean Vines, “Cloud Security”[ISBN:0470589876],2010. 2.JohnRittinghouse,JamesRansome,“CloudComputing”CRCPress;1edition[ISBN:1439806802],2009. 3.J.R. ("Vic") Winkler, “Securing the Cloud” Syngress [ISBN: 1597495921] 2011 1stEdition,KindleEdition |