|  |  |
| --- | --- |
| ../logo.png | SRM INSTITUTE OF SCIENCE AND TECHNOLOGY |
| Kattankulathur, Kancheepuram District 603203, Tamil Nadu, India |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Course Code | 18CSE308T | Course Name | AWS Solutions Architect | Course Category | C | Professional Elective | L | T | P | C |
| 3 | 0 | 0 | 3 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Pre-requisite Courses | Nil | | Co-requisite Courses | Nil | | Progressive Courses | Nil |
| Course Offering Department | | Networking and Communications | | | Data Book / Codes/Standards | Nil | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Course Learning Rationale (CLR): | | | | The purpose of learning this course is to: | |  | Learning | | |  | Program Learning Outcomes (PLO) | | | | | | | | | | | | | | |
|  |  |
| CLR-1 : | Understand the concepts of Computing instances and database service in AWS platform | | | | |  | 1 | 2 | 3 |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| CLR-2 : | Apply Management and Governance services at cloud deployment model | | | | |  | Level of Thinking (Bloom) | Expected Proficiency (%) | Expected Attainment (%) |  | Engineering Knowledge | Problem Analysis | Design & Development | Analysis, Design, Research | Modern Tool Usage | Society & Culture | Environment & Sustainability | Ethics | Individual & Team Work | Communication | Project Mgt. & Finance | Life Long Learning | PSO - 1 | PSO - 2 | PSO – 3 |
| CLR-3 : | Implementation of logical ,secured Networking groups and applying Cloud Content Delivery in AWS | | | | |  |  |
| CLR-4 : | Categories the different Storage service systems and different Anlytics services in AWS platform | | | | |  |  |
| CLR-5 : | Apply Security measures to protect the resources and understands compliance management in AWS | | | | |  |  |
|  | |  | | | |  |  |
| Course Learning Outcomes (CLO): | | | | | At the end of this course, learners will be able to: | |  |
| CLO-1 : | | | Demonstrate on Computing instances and database service in AWS | | | | 3 | 80 | 70 |  | M |  |  |  | H |  |  |  |  |  |  |  |  |  |  |
| CLO-2 : | | | Interpret Management and Governance services | | | | 3 | 85 | 75 |  | H |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CLO-3 : | | | Implement Networking and Cloud front Content Delivery in AWS | | | | 3 | 75 | 70 |  | M |  |  | H |  |  |  |  |  |  |  |  |  |  |  |
| CLO-4 : | | | Compare different Storage systems and Anlytics services in AWS | | | | 3 | 85 | 80 |  |  | H |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CLO-5 : | | | Examine Security measures and compliance in AWS | | | | 3 | 85 | 75 |  |  |  |  | H |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Duration (hour) | | 9 | 9 | 9 | 9 | 9 |
| **S-1** | SLO-1 | Compute:Amazon EC2 | Management and Governance: AWS Auto Scaling | Migration and Transfer: AWS Database Migration Service (AWS DMS) | Analytics: Amazon Athena | Security, Identity, and Compliance: AWS Certificate Manager (ACM) |
| SLO-2 | AWS Elastic Beanstalk | AWS Backup | AWS DataSync | Amazon Elasticsearch Service (Amazon ES) | AWS Directory Service |
| **S-2** | SLO-1 | Amazon Elastic Container Service (Amazon ECS) | AWS CloudFormation | AWS Migration Hub | Amazon EMR | Amazon GuardDuty |
| SLO-2 | Amazon Elastic Kubernetes Service (Amazon EKS) | AWS CloudTrail | AWS Server Migration Service (AWS SMS) | AWS Glue | AWS Identity and Access Management (IAM) |
| **S-3** | SLO-1 | Elastic Load Balancing | Amazon CloudWatch | AWS Snowball | Amazon Kinesis | Amazon Inspector |
| SLO-2 | AWS Config |
| **S-4** | SLO-1 | AWS Fargate | Amazon EventBridge (Amazon CloudWatch Events) | AWS Transfer Family | Amazon QuickSight | AWS Key Management Service (AWS KMS) |
| SLO-2 | AWS Lambda | AWS Organizations | Networking and Content Delivery: Amazon API Gateway | Storage: Amazon Elastic Block Store (Amazon EBS) |
| **S-5** | SLO-1 | AWS Billing and Cost Management: AWS Budgets | AWS Resource Access Manager | Amazon CloudFront | Amazon Elastic File System (Amazon EFS) | Amazon Macie |
| SLO-2 |
| **S-6** | SLO-1 | Cost Explorer | AWS Systems Manager | AWS Direct Connect | Amazon FSx | AWS Secrets Manager |
| SLO-2 |
| **S-7** | SLO-1 | Database: Amazon Aurora | AWS Trusted Advisor | AWS Global Accelerator | Amazon S3 | AWS Shield |
| SLO-2 |
| **S-8** | SLO-1 | Amazon DynamoDB | Application Integration: Amazon Simple Notification Service (Amazon SNS) | Amazon Route 53 | Amazon S3 Glacier | AWS Single Sign-On |
| SLO-2 | Amazon ElastiCache |
| **S-9** | SLO-1 | Amazon RDS | Amazon Simple Queue Service (Amazon SQS) | AWS Transit Gateway, Amazon VPC (and associated features | AWS Storage Gateway | AWS WAF |
| SLO-2 | Amazon Redshift |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Learning Assessment | | | | | | | | | | | |
|  | Bloom’s  Level of Thinking | Continuous Learning Assessment (50% weightage) | | | | | | | | Final Examination (50% weightage) | |
| CLA – 1 (10%) | | CLA – 2 (15%) | | CLA – 3 (15%) | | CLA – 4 (10%)# | |
| Theory | Practice | Theory | Practice | Theory | Practice | Theory | Practice | Theory | Practice |
| Level 1 | Remember | 40% | - | 30% | - | 30% | - | 30% | - | 30% | - |
| Understand |
| Level 2 | Apply | 40% | - | 40% | - | 40% | - | 40% | - | 40% | - |
| Analyze |
| Level 3 | Evaluate | 20% | - | 30% | - | 30% | - | 30% | - | 30% | - |
| Create |
|  | Total | 100 % | | 100 % | | 100 % | | 100 % | | 100% | |

# CLA – 4 can be from any combination of these: Assignments, Seminars, Tech Talks, Mini-Projects, Case-Studies, Self-Study, MOOCs, Certifications, Conf. Paper etc.,

|  |  |  |
| --- | --- | --- |
| **Learning**  **Resources** | https://docs.aws.amazon.com/ | .  . |
| Course Designers |  |  |
| Experts from Industry | Experts from Higher Technical Institutions | Internal Experts |
| Mr.Mohit Kumar,  Senoir Data Scientist,  Verizon ,Bangalore,Karnataka,India | NA | Dr.M.Saravanan,Associate Professor ,SRMIST,NWC,KTR |
| Ms.V.LAvanya,Assistant Professor,NWC,SRMIST,KTR |