**SSN COLLEGE OF ENGINEERING, KALAVAKKAM – 603 110**

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

**B.E(CSE) – CS6307 GRID AND CLOUD COMPUTING**

|  |  |
| --- | --- |
| **ACADEMIC YEAR: 2017-2018 (ODD)** | **BATCH: 2014-2018** |

**COURSE DESCRIPTION**

* Understand how Grid computing helps in solving large scale scientific problems.
* Gain knowledge on the concept of virtualization that is fundamental to cloud computing.
* Learn how to program the grid and the cloud.
* Understand the security issues in the grid and the cloud environment.

**BLOOMS TAXONOMY**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Remember | Understand | Apply | Analyse | Evaluate | Create |
| K1 | K2 | K3 | K4 | K5 | K6 |

**COURSE OUTCOMES**

CO1: Understand & Apply grid computing techniques to solve problems. [K3]

CO2: Understand & Apply the concept of virtualization. [K3]

CO3: Understand & Use the grid and cloud tool kits. [K3]

CO4: Understand the security models in the grid and the cloud environment. [K2]

**PROGRAMME OUTCOMES**

1 Engineering knowledge: Our graduates will have the knowledge of mathematics, logic, probability and statistics, computer science and engineering, and the skill to apply them in the fields of computer software and hardware. **[K3]**

2 Problem analysis: Our graduates will have the knowledge and skill to identify, formulate, and solve hardware and software problems using sound computer science principles. **[K3, K4]**

3 Experimentation: Our graduates will have the skill to design and conduct experiments, organize, analyze, and interpret data. **[K3, K4, K5]**

4 Design and development: Our graduates will have the skill to design and construct hardware and software systems, components, or processes as per needs and specifications. **[K4]**

5 Team work: Our graduates will have the interpersonal and communication skills to function as team players on multidisciplinary teams.

6 Modern tools usage: Our graduates will be able to use the techniques, skills, and modern hardware and software tools necessary for computer engineering practice. **[K2, K4]**

7 Social and environmental responsibilities: Our graduates will demonstrate knowledge related to social, ethical, legal, economical, health and safety, sustainability and environmental dimensions.

8 Communication skills: Our graduates will be able to effectively communicate technical information in speech, presentation, and in writing.

9 Contemporariness: Our graduates will have knowledge of contemporary issues in the practice of their profession.

10 Self-learning: Our graduates will develop confidence for self-learning and ability for life-long learning.

11 Competitive exam preparedness: Our graduates will participate and succeed in competitive examinations such as GATE, IES, GRE.

12 Leadership: Our graduates are trained to enhance their managerial skills, leadership quality and entrepreneurial spirit.

**COURSE OUTCOMES MAPPED TO PROGRAMME OUTCOMES**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| K3 | K4 | K5 | K4 |  | K3 |  |  |  |  |  |  |
| CO1: K3 | 3 | 2 | 2 | 2 |  | 3 |  |  |  | 1 |  |  |
| CO2: K3 | 3 | 2 | 2 | 2 |  | 3 |  |  |  | 1 |  |  |
| CO3: K3 | 3 | 2 | 2 | 2 |  | 3 |  |  |  | 1 |  |  |
| CO4: K2 | 2 | 2 | 1 | 2 |  | 2 |  |  |  | 1 |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 3 | Strong | 2 | Significant | 1 | Reasonable |

**DESCRIPTION OF ASSESSMENT TOOLS**

*Assignments:* Assignments covering most of the topics

*Exams:* 3 continuous assessments during the semester and final exam.

**OURSE ASSESSMENT MATRIX**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | CO1 | CO2 | CO3 | CO4 |
| *Assignments* | X | X | X |  |
| *Assessment I* | X |  |  |  |
| *Assessment II* | x | X |  |  |
| *Assessment III* |  | X | X | X |

**Prepared By Verified By Approved By**

**K. Vallidevi Y. V. Lokeswari PAC Member HOD / CSE**

**Justification of CO-PO Mapping**

|  |  |  |  |
| --- | --- | --- | --- |
| **CO** | **Description** | **Knowledge Level** | **Remarks** |
| CO1 | Understand & Apply grid computing techniques to solve problems. | K2,K3 | K2: Understand the basic concepts of Grid Computing Techniques  K3: Apply the Grid Computing Techniques for deploying applications |
| CO2 | Understand & Apply the concept of virtualization. | K2,K3 | K2: Understand the concepts of Virtualization.  K3: Apply the learned concept by deploying VMs |
| CO3 | Understand & Use the grid and cloud tool kits. | K2,K3 | K2: Understand the Toolkits for Grid and Cloud Computing.  K3: Apply the learned toolkits – Globus for Grid Computing and Eucalyptus for Cloud Computing |
| CO4 | Understand the security models in the grid and the cloud environment. | K2 | K2: Understand the security models available in Grid and Cloud computing environment. |

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