# AMRUTVAHINI COLLEGE OF ENGINEERING, SANGAMNER
## COMPUTER ENGINEERING DEPARTMENT
### M.E. Computer Engg. (2013 Pattern) Course Outcomes

| Subject Code | Course Name | Course Outcomes-on the completion of this course student will be able to- | |
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| | **SEM – I** | | |
| **510101** | Applied Algorithms | CO1 | Apply basic algorithmic strategies to real problem in algorithmic area |
| | | CO2 | Analyze searching and sorting strategies, also graph algorithms |
| | | CO3 | Design approximation schemes |
| | | CO4 | Compare algorithmic approach on line, line segment, polygon, convex hull. |
| | | CO5 | Identify and formulate problems as linear program |
| | | CO6 | Analyze probability-based problems |
| **510102** | High Performance Databases | CO1 | Describe different techniques for index selection and database tuning |
| | | CO2 | Perform comparative analysis of complex systems |
| | | CO3 | Explain advanced transaction Management in distributed database System. |
| | | CO4 | Describe different data representation and analyses the use of appropriate representation in real time environment |
| | | CO5 | Apply emerging trends in databases |
| | | CO6 | Use advanced database Programming concepts |
| **510103** | Advanced Computer Architecture | CO1 | Identify the Computer architecture and computing model. |
| | | CO2 | Compare different performance metrics. |
| | | CO3 | Organize processor and memory hierarchy. |
| | | CO4 | Distinguish between Parallel and scalable Architecture. |
| | | CO5 | Apply and evaluate parallel programming on program development Environment. |
| | | CO6 | Apply and analysis of Advanced computing architectures. |

| 510104 | Research Methodology | CO1 | Explain and apply research terms; describe the research process and the principle activities, skills associated with the research process. |
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| | | CO2 | Identify the research Problem and formulate the hypothesis. |
| | | CO3 | Demonstrate the different types of research design and techniques |
| | | CO4 | Analyze different Data collection techniques. |
| | | CO5 | Apply data preprocessing techniques and summarize the data |
| | | CO6 | Examine the research findings and interpret it into thesis. |
| 510105 B | Elective –I-IRWM | CO1 | Explain information retrieval steps. |
| | | CO2 | Build information retrieval model. |
| | | CO3 | Describe concept of web mining. |
| | | CO4 | Analyze the performance of information retrieval model using different parameters and understand concept of recommender systems. |
| | | CO5 | Compare different information retrieval task on semantic web. |
| | | CO6 | Explain different topics related to IR and Web mining. |
| 510106 | Laboratory Practice-I | CO1 | Design experiments to measure the performance of a computer system with an understanding of the appropriate performance metrics to be used. |
| | | CO2 | Formulate Algorithm for solving the given problem. |
| | | CO3 | Analyze the strengths and weaknesses of programming languages for effective and efficient program development. |
| | | CO4 | Create application to demonstrate Database connectivity. |
| | | CO5 | Construct capacity planning and other system upgrade estimates by instrumenting the system, monitoring its usage, characterizing workloads, predicting the performance and selecting the cost-efficient highest performance alternative. |
| | | CO6 | Model, characterize and reproduce workloads to a computer system. |

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|  | **SEM – II** |  |  |
| **510107** | Operating System Design | CO1 | Apply the Operating system object to achieve Resources management |
|  |  | CO2 | Analyze the Implementation of a Simple Operating System with Processes and its communication |
|  |  | CO3 | Design the scheduling algorithms and various mechanism in scheduling |
|  |  | CO4 | Identify and formulate Levels of Memory Management, Linking and Loading a Process. |
|  |  | CO5 | Illustrate the various problems of I/O Devices and file system |
|  |  | CO6 | Demonstrate the experiment (Simulations) on Resource Management |
| **510108** | Software Design and Architecture **(ANN)** | CO1 | Identify the Software design Processes. |
|  |  | CO2 | Illustrate Object oriented design concept. |
|  |  | CO3 | Build Software Architecture for any application. |
|  |  | CO4 | Make use of Software design architecture for designing software. |
|  |  | CO5 | Describe and build Archetype Patterns. |
|  |  | CO6 | Interpret Software architectures. |
| **510109** | Advanced Computer Networks | CO1 | Identify and discuss the concepts underlying IPv6 protocol, and their main characteristics and functionality; |
|  |  | CO2 | Analyse the principles and functionality of mobile IP, explaining its concretization in IPv6; the needs of optimization of the mobility mechanisms and description of some extensions that aim to reduce handover latency and requirements from terminals; |
|  |  | CO3 | Recognize the need for service integration and discuss how it can be accomplished; |
|  |  | CO4 | Explain and exemplify current QoS architectures and mechanisms, and the QoS support challenges in future networks; |
|  |  | CO5 | Explain the design issues in transport services in face of applications and services requirements; |
|  |  | CO6 | Analyse theoretical and practical concepts behind the design of multiconstarined applications and services; |

| 510110 A | Elective –II-BIDM | CO1 | Summarize the business intelligent system and apply it for business model |
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| | | CO2 | Analyze data warehouse design using data warehouse technology |
| | | CO3 | Interpret OLAP & Apply it for multidimensional data analysis purpose. |
| | | CO4 | Compare the different association rules and apply it for market basket analysis |
| | | CO5 | Compare various classification algorithms and use it for business improvement. |
| | | CO6 | Identify and classify various clustering algorithms and use it for business improvement. |
| 510111 | Laboratory Practice-II | CO1 | Formulate performance models for a given computer and a communication system by applying modeling techniques like Markov Chains, Queuing theory and Queue networks. |
| | | CO2 | Analyze the performance of a system by suitably using queuing theory. |
| | | CO3 | Analyze, present and interpret the experimental results to evaluate alternative system implementations. |
| | | CO4 | Develop appropriate architectural and detailed designs to build software components using Object Oriented Analysis and UML diagrams. |
| | | CO5 | Analyze Objects; identify their attributes, methods, relationships, responsibilities. |
| | | CO6 | Examine Security planning, Risk Analysis, ethical issues in Computer security, Protecting programs .and ethical issues. |

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|  | **SEM – III** |  |  |
| **610101** | Advanced Storage Systems and Infrastructure Management | CO1 | Implement of Information storage system and to Evaluate storage architecture. |
|  |  | CO2 | Compare Various storage technologies and storage virtualization. |
|  |  | CO3 | Describe articulate business continuity solutions including, backup and recovery technologies, and local and remote replication solutions. |
|  |  | CO4 | Analyze parameters of infrastructure management and describe common infrastructure Management activities and solutions. |
|  |  | CO5 | Apply Infrastructure management for IT organization |
|  |  | CO6 | Apply Service delivery processes. |
| **610102** | Advanced Unix Programming | CO1 | Apply the concepts of operating system to a distributed environment and identify the features specific to distributed systems. |
|  |  | CO2 | Apply the process management and synchronization concepts for the given scenario in distributed environment. |
|  |  | CO3 | Illustrate the different consistency model, replacement strategy in unix programming. |
|  |  | CO4 | Apply the distributed file system concepts for a given scenario. |
|  |  | CO5 | Identify the role of operating system in cloud and mobile environment. |
|  |  | CO6 | Identify the role of client and server in inter process communication. |
| **610103A** | Elective-III- Network Security | CO1 | Compare the different security problems & Learn a model of Network Security. |
|  |  | CO2 | Interpret how the security at Application & Network layer is developed using different protocols |
|  |  | CO3 | Analyze different malicious program and avoid it by applying firewall |
|  |  | CO4 | Organize different cryptographic techniques in to different level |
|  |  | CO5 | Illustrate the different security policies and apply it for use authentication purpose. |
|  |  | CO6 | Identify IP spoofing attack and prevent it using spoofing tool. |