

**18MCS201 – PHP PROGRAMMING****Course Objectives**

- To introduce the importance of PHP in web page design.
- To understand the features like functions, forms in PHP.
- To understand Files, OOPs concepts , Cookies, Sessions and Data base.
- To handle requests and draw images on the server with AJAX.

Semester	II
Credit	4
Max. Marks	CIA -30 CE -70 TOT =100

**UNIT I**

11

**PHP:** Introduction – Essential PHP – Operators and Flow control: Working with math, assignment, increment and decrement, string, bitwise, execution, comparison and logical operators, Working with loops – Strings and Arrays.

**UNIT II**

10

**PHP Functions and Browser handling power:** Creating Functions, passing functions, passing arrays, pass by reference, default arguments, returning data, arrays, lists, references, accessing global data, working with static variables, PHP conditional functions, variable functions, nesting functions – Reading data in web pages: Handling text fields, areas, check boxes, radio buttons, list boxes, password controls, hidden controls, image maps, file uploads, buttons – PHP Browser handling power.

**UNIT III**

12

**Working with Object oriented programming and File handling:** Object oriented programming: creating classes, objects, setting access to properties and methods, using constructors and destructors, inheritance, overriding and overloading methods, auto loading classes – File Handling: open, read, close, parsing files, copy, delete, write and append files.

**UNIT IV**

11

**Working with databases and setting sessions, cookies and FTP:** Databases: creating, accessing, updating, inserting, deleting and sorting databases – Setting sessions, cookies and FTP: setting , reading, deleting cookies, working, downloading, uploading, deleting, creating and removing directories with FTP.

**UNIT V**

11

**AJAX and Drawing Images on the server:** Ajax: Handling AJAX requests, downloading images using AJAX, downloading javascript with AJAX– Drawing images on the server: creating and displaying images, drawing lines, rectangles, ellipse, arcs, polygons, figures, individual pixels, text, virtual text, working with image files, tiling images, copying images.

**Total Periods:55****TEXT BOOK**

- 1.“The Complete Reference PHP Covers PHP 5.2“, Steven Holzner, Tata McGraw-Hill Edition 2008.  
(UNIT I - Chapter 1,2,3    UNIT II - Chapter 4,5,6    UNIT III - Chapter 7,9  
UNIT IV - Chapter 10,11    UNIT V Chapter 12,14)

**REFERENCES**

1. PHP6 and MySQL6 Bible – Steve Svehring
2. PHP Programming Solutions – Vickram Viswani

**COURSE OUTCOME**

- Utilizing the basic concept of statements and arrays.
- Implement functions and browser handling power of PHP.
- Imparting Database applications, File handling, Cookies in the webpage.
- Design and Implement Interactive Web Site using Forms, OOPS and AJAX.
- Create easy communication with the servers using AJAX, Drawing images on server.

**18MCS202 CORE VI - MOBILE APPLICATION  
DEVELOPMENT**

<b>Semester</b>	<b>II</b>
<b>Credit</b>	<b>4</b>
<b>Paper Types</b>	<b>Core</b>
<b>Max. Marks</b>	<b>CIA -30 CE -70 TOT -100</b>

**AIM**

This course gives the ability to send and receive data across the cellular networks efficiently. Better understanding of Operating Systems such as Android and iOS used in Mobile data communication for developing Mobile applications that allows users to transmit data from remote locations to other remote or fixed locations effectively.

**COURSE OBJECTIVES**

- Understand mobile applications and to solve ,analyze real world problems
- Develop the requirements of the software and efficient product designs.
- work with values & social concern bridging the digital divide and to meet the current trends
- Awareness on the life-long learning, ethics and codes of professional practice.

**PREREQUISITE**

Students should have a basic understanding of any of the programming languages, especially Objective C programming language that helps to learn the concepts of iOS programming faster. It's needed to have basic understanding on Java programming to learn Android application development.

**UNIT-I INTRODUCTION****12**

Preliminary Considerations – Cost of Development – Importance of Mobile Strategies in Business World – Mobile Web Presence – Mobile Applications – Marketing – Web Services for Mobile Devices – Creating Example Web Service \_ Debugging Web Service

**UNIT-II MOBILE USER INTERFACE DESIGN****12**

Effective Use of Screen Real Estate – Understanding Mobile Application Users – Understanding Mobile Information Design – Understanding Mobile Platforms – Using the Tools for Mobile Interface Design – Choosing a Mobile Web Option – Adaptive Mobile Website – Mobile Web Applications with HTML 5

**UNIT-III ANDROID APPLICATION DEVELOPMENT****12**

Getting to know the Android User Interfaces – Designing Your User interface using Views – Displaying Pictures and Menus with Views – Using Image views to Display pictures – Using menus with views – Data Persistence – Saving and loading user performances - Persisting data to files – Creating and using Data bases

**UNIT-IV CONTENT PROVIDERS, MESSAGING, NETWORKING, LOCATION****12**

Content providers using a content provider-creating content providers - SMS Messaging, Sending E-mail – Networking – Downloading Binary Data, Text Files- Accessing Web Services – Performing Asynchronous Calls – Location Based Services – Displaying Maps – Getting Location Data – Creating your own services – Communicating between a service and an activity – Binding activities to Services

**UNIT– IOS ,WINDOWS AND MONO TOUCH FOR ANDROID**

**12**

Getting started with iOS – iOS Project – Debugging iOS Apps – Objective C Basics – Hello Word App – Building the derby app in iOS – Windows Phone 7 Project – Building Derby App in Windows Phone 7- The Mono Framework-Tools for Android-Mono develop-Debugging-Mono Projects-Building the Derby app with Mono-Mono touch Features

**Total Hours: 60**

**COURSE OUTCOMES**

After successful completion of this course, the student will be able to:

- Apply foundational mobile application concepts
- Identify, formulate and solve real world hardware and software problems.
- To work with database technologies, iOS apps
- Examine mobile application market and web services for various mobile devices
- Able to build and develop tools for Android,iOS

**TEXT BOOKS**

1. Jeff McWherter and Scott Gowell,” Professional Mobile Application Development”, Wrox 2015.
2. Wei – Meng Lee, “Beginning Android Application Development”, Wiley 2011

**REFERENCE BOOK**

1. Charlie Collins, Michael Galpin and Matthias Kappler, “Android in Practice”, Dream Tech. 2012.

**18MCS203 CORE VII - NETWORK MANAGEMENT**

<b>Semester</b>	<b>II</b>
<b>Credit</b>	<b>4</b>
<b>Paper Types</b>	<b>Core</b>
<b>Max. Marks</b>	<b>CIA -30 CE -70 TOT -100</b>

**AIM**

Aim of this course is to teach the concepts and techniques of network architecture management. To perform Remote Network Monitoring in TCP/IP Networks with protocols and architecture behind standards based network management.

**COURSE OBJECTIVES**

- To understand the fundamental concepts of network management
- To survey current network management systems and tools
- To examine network management protocols.

**PREREQUISITE**

The students should have a basic understanding of computer networking and cryptography. As network security deals with all aspects related to the protection of the sensitive information assets existing on the network, Knowledge about communication protocols are a plus. Also knowledge about fundamental security services for data communication will be helpful.

**UNIT – I TECHNOLOGY SERVICES AND COMPUTER NETWORK TECHNOLOGY 12**

Introduction to Network Management-IT Services, Challenges, and Opportunities -Economics of IT Services-Network Management Systems and Organization-Network Components – Topologies - Internet Architecture - Bridged and Router Networks-Ring Networks, Virtual LANs, and Broadband Services.

**UNIT – II NETWORK MANAGEMENT 12**

Network Management Basics-Network Management Architectures & Applications Management Standards and Models – Network Management Functions-Configuration Management & Auto discovery-Configuration Database & Reports-Abstract Syntax Notation One (ASN.1).

**UNIT – III SNMP PROTOCOL 12**

SNMP v1: Structure of Management Information-Std. Management Information Base (MIBs), Network Management Functions: Fault Management-Fault Identification and Isolation- Event Correlation Techniques. SNMP v2: Version 2 Protocol Specification-Version 2 MIB Enhancements-MIB-II, Case Diagrams - Security Management - Protecting Sensitive Information - Host and User Authentication-Key Management. SNMP v3: Version 3 Protocol & MIB - SNMP v3 User Based Security Model – View Based Access Model - Network Management Functions: Accounting Management - Performance Management- Network Usage, Metrics and Quotas.

**UNIT – IV REMOTE NETWORK MONITORING RMON 12**

RMON1: Statistics Collection- Alarms and Filters-Remote Network Monitoring RMON 2-Monitoring Network Protocol Traffic-Application-Layer Visibility-Management Tools, Systems and Applications-Test and Monitoring Tools-Integrating Tools-Development Tools- Web-based Enterprise Management-Enterprise Network Management: Network Management System Requirements- Network Management Applications and Systems.

**UNIT – V TELECOMMUNICATIONS MANAGEMENT FOR SERVICE PROVIDERS 12**

Telecommunications Network Management- ATM Management-Management of broadband Networks- Real-time OSs for Next-Generation Service Management-The Operations Systems Implications of Managing Next-Generation Networks Managing a Portfolio of Broadband Access Technologies-Next-Generation Network Design-Experiences in Establishing a Nationwide Broadband Network -Quality of Service in Heterogeneous Networks-Customer-Empowered Networking.

## **COURSE OUTCOMES**

After successful completion of this course, the student will be able to:

- Understand Network types and technology services.
- Understand Network Management Architecture
- Analyze SNMP protocol and Use SNMP management software to monitor any network device in which SNMP agent software has been installed.
- Analyze RMON tools for Network Management, and use RMON mechanism to collect and process data at the point of collection.
- Construct Network management plan for large enterprise.
- Create or structure network management policies for small enterprises.

**Total Hours: 60**

## **TEXT BOOK**

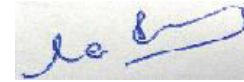
1. Mani Subramanian , “Network Management: Principles and Practice”, Pearson,2<sup>nd</sup> Edition, 2013.

## **REFERENCE BOOKS**

1. Mauro, D.R. and Schmidt K.J.,” Essential SNMP”, O’Reilly & Associates, Sabastopol, CA., 3<sup>rd</sup> Edition, 2012.
2. Peterson L. and Davie B, “Computer Networks: A Systems Approach”, Morgan Kaufmann Publishers Inc., 5<sup>th</sup> Edition, 2016.
3. Mahbub Hassan and Raj Jain, High Performance TCP/IP Networking, Prentice Hall, 2015.



Approved By  
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**18MCS204 PRACTICAL –III PHP PROGRAMMING LAB**

<b>Semester</b>	<b>II</b>
<b>Credit</b>	<b>4</b>
<b>Paper Types</b>	<b>Practical</b>
<b>Max. Marks</b>	<b>CIA -30 CE -70 TOT -100</b>

**COURSE OBJECTIVES**

- To understand various methods to handle string and array.
- To be aware of the OOPs concepts in PHP.
- To know the file handling techniques.
- To create database and to manipulate data.
- To be familiar with the graphics methods of PHP.

**LIST OF EXPERIMENTS**

1. Associative array implementation in a PHP program.
2. Illustrate String handling in PHP.
3. How to use various Functions of PHP.
4. How to read form data in PHP.
5. Implement Inheritance in a PHP program.
6. Create a PHP program to implement Overloading and overriding
7. Write a PHP program for File handling.
8. Construct a PHP program to create a Database and to Insert and Delete data.
9. Develop a PHP program to implement cookies.
10. Draw images on a web page designed using PHP.

**Total Hours: 60****COURSE OUTCOMES**

After successful completion of this course, the student will be able to:

- Handle array and string handling methods.
- Implement OOPs Concepts in an application.
- Create a database in MYSQL and to manipulate data into it.
- Store information about client's session using Cookies.
- Design an interactive webpage with graphical techniques.



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## 18MCS205 PRACTICAL-IV MOBILE APPLICATION DEVELOPMENT LAB

### COURSE OBJECTIVES

- Know the components and structure of mobile application development frameworks for android and windows OS based mobiles.
- Understand how to work with various mobile application development frameworks.
- Learn the basic and important design concepts and issues of development of mobile applications.
- Understand the capabilities and limitations of mobile devices.

### LIST OF EXPERIMENTS

1. Construct an application that uses GUI components, Font and Colors
2. Create an application that uses Layout Managers and event listeners.
3. Develop a native calculator application.
4. Write an application that draws basic graphical primitives on the screen.
5. Develop an application that makes use of database.
6. Illustrate by creating an application that uses RSS Feed.
7. Implement an application that implements Multi-threading
8. Develop a native application that uses GPS location information.
9. Write a mobile application that creates alarm clock
10. Implement an alert upon receiving messages in an application.

**Total Hours: 60**

### COURSE OUTCOMES

Having successfully completed this course, the student will be able to:

- Apply foundational mobile application concepts.
- Understand, Identify, Formulate and Solve real world hardware and software problems.
- To work with database and iOS Apps.
- Examine mobile application and web services for various mobile devices.

Prepared By



(R NAGARAJAN)

Approved By



(Dr G MARIA PRISCILLA)

**18MCS206 MINI PROJECT****GUIDELINES TO M.Sc. (Computer Science) MINI PROJECT REPORT PREPARATION**

- Formulate solutions to computing problems
- Analyze and compare alternative solutions to computing problems
- Design and implement effective solutions to computing problems
- Apply sound principles to the synthesis and analysis of computer systems

The students should strictly adhere to the following points while preparing their final project report.

<b>Semester</b>	<b>II</b>
<b>Credit</b>	<b>3</b>
<b>Paper Types</b>	<b>Core</b>
<b>Max. Marks</b>	<b>CIA -80 CE -20 TOT -100</b>

1. Students are expected to undergo project work individually and submit individual project report.
2. Project reports should be typed / printed in double space using A4 size bond sheets with left margin at column 10 and a right margin at column 75.
3. A page should not contain more than 25 lines.
4. The source code should be loaded and made readily available in the system during Viva – Voce examination for verification by the examiners.
5. Table of contents should be in the specified format. [ as in Annexure IV]
6. The students are asked to report to the concerned guides regularly during their project period to present their progress of work.
7. The students should submit the project report in the Last week of March, 2019.

**TENTATIVE DATES REGARDING PROJECT**

**I Review** : Meet concern faculty guide to show form design on or before 20-01-2019.

**II Review** : Meet concern faculty guide report about your table design and coding on or Before 24-02-2019

**III Review** : To run your project on or before 27-03-2019.

Rough Documentation of the Project, Submitted to the respective guides, get corrected and modifications any should be done. Final submission of the bounded project as per specifications should be done - Last Week of MARCH, 2019.

\*\* Exact dates will be intimated later

Note: For each Meeting internal marks will be awarded based on their punctuality, performance and quality of work.

- The format of the report is as follows :
  - Wrapper ( Annexure I )
  - Copy of the Wrapper
  - Certificate from the department (Annexure II )
  - Declaration by the student (Annexure III)
  - Acknowledgement
  - Table of contents (Annexure IV)
  - Chapters.

**NOTE:** (In all the meetings, students should meet the class in charge to sign in the attendance; Marks will be awarded for attendance)

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**ANNEXURE I**

< PROJECT TITLE >

PROJECT WORK

DONE BY

NAME : < STUDENT NAME >

REG.NO : <REGISTER NUMBER >

Under the guidance of

<Name of the guide >

<Designation>

<COLLEGE EMBLEM>

DEPARTMENT OF COMPUTER SCIENCE  
SRI RAMAKRISHNA COLLEGE OF ARTS AND SCIENCE  
(FORMERLY S.N.R SONS COLLEGE-AUTONOMOUS)  
(REACCREDITED WITH "A" BY NAAC )  
(AFFILIATED TO BHARATHIAR UNIVERSITY)  
COIMBATORE – 641 006.

APRIL 2019.

{NOTE: This is just a sample copy. You should take care of alignment, font, font size and spacing. }

**ANNEXURE II**

(Specimen Copy of Certificate)

**CERTIFICATE**

This is to certify that the project work entitled

<Name of the project >

done at

<Company Name>

is a bonafide record of work done by

<Student name >

<Register No. >

in partial fulfillment for the award of the degree of

**MASTER OF COMPUTER SCIENCE**

Of Bharathiar University during

DECEMBER 2018 to APRIL 2019

Head of the Department,  
<Name of HOD>  
Prof. & Head,  
Dept. of Computer Science  
Sri Ramakrishna College of Arts  
& Science [AUTONOMOUS ]

Faculty Guide  
<Name of Guide>  
<Designation>  
Department of Computer Science  
Sri Ramakrishna College of Arts  
& Science, [AUTONOMOUS]

Submitted for the viva – voce examination held on \_\_\_\_\_

**EXTERNAL EXAMINER**

**INTERNAL EXAMINER**

### **ANNEXURE III**

#### **DECLARATION**

I hereby declare that this project work entitled\_\_\_\_\_for submitted to Sri Ramakrishna College of Arts & Science, An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore, is a record of original work done by me under the guidance of <guide name> and that this project work has not formed the basis for the award of any degree / diploma / associate ship / fellowship or similar to any candidate in any university.

Place :

Date :

Signature of the Student

Countersigned by

<Guide Name >

**ANNEXURE – IV**  
**TABLE OF CONTENTS**

	(Specimen Copy of contents page)	Page No
ACKNOWLEDGEMENT		
ABSTRACT		
Chapter I	Introduction	
	An Overview	
	Objectives of the project	
	Organization project	
	Scope of the system	
Chapter II	System Analysis	
	Existing System	
	Proposed System	
	Hardware Specification	
	Software Specification	
Chapter III	Design & Development	
	Design process	
	Data Base Design	
	Input Design	
	Output Design	
Chapter IV	Testing and Implementation	
	System Testing	
	Quality Assurance	
	System Implementation	
	System Maintenance	
Chapter V	Conclusion	
	Scope of the Future Development	
Bibliography (Should be in Specific format (Author name (alphabetic order), Title of the book, Publication, Edition & Year)).		
Annexure		
Source Code		
Screens		
Tables		
Reports		



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**18MCSE01 ELECTIVE-I DATA MINING AND WAREHOUSING**

<b>Semester</b>	<b>II</b>
<b>Credit</b>	<b>4</b>
<b>Paper Types</b>	<b>Elective</b>
<b>Max. Marks</b>	<b>CIA -30 CE -70 TOT -100</b>

**AIM**

To teach the techniques for preprocessing data before mining, and the concepts related to data warehousing, on-line analytical processing (OLAP), and data generalization. It helps to know the methods for mining frequent patterns, associations, and correlations.

**COURSE OBJECTIVES**

- To Understand Data mining principles, techniques and Introduce DM as cutting edge business intelligence.
- To expose the students to the concepts of Data warehousing Architecture, OLAP and Implementation.
- To learn to use association rule mining for handling large data.
- To be clear with the concept of classification for the retrieval purposes.
- To study the clustering techniques in details for better organization and retrieval of data.
- To identify Business applications and Trends of Data mining.

**PREREQUISITE**

As data warehouse is constructed by integrating data from multiple heterogeneous sources the students should have an understanding of basic database concepts such as schema, ER model, structured query language, etc.

**UNIT-I****12**

Data Mining: What motivated Data Mining? Why it is important- What is Data Mining - Kind of Data- Data Mining Functionalities – Classification of Data Mining systems- Data Mining Task Primitives-Integration of a Data Mining system with a Database or Data Warehouse System.

Data Preprocessing: Why Preprocess the Data–Data Cleaning–Data Integration and Transformation–Data Reduction

**UNIT-II****12**

Data Warehouse and OLAP Technology: What is Data Warehouse–A Multidimensional Data Model–From Tables and spreadsheets to Data Cubes-Stars, Snowflakes and Fact Constellations-Examples -Data Warehouse Architecture – From Data Warehousing to Data Mining.

**UNIT-III****12**

Data Cube Computation and Data Generalization: Efficient Methods for Data Cube Computation –Attribute Oriented Induction-An Alternate Method for data Generalization and Concept Description

**UNIT-IV****12**

Mining Frequent Patterns ,Associations: Basic Concepts and a Road map-Efficient and scalable Frequent Item set Mining Methods-The Apriori Algorithm-Generating Association Rules from Frequents Item sets-Mining various kinds of Association Rules.

Classification and Prediction: What is Classification and Prediction–Classification by Decision Tree Induction–Bayesian Classification-Classification by back Propagation- Associative Classification: Classification by Association Rule Analysis-Prediction.

**UNIT-V****12**

Cluster Analysis: Definition–Types of Data–A Categorization of Major Clustering Methods–Partitioning Methods – Hierarchical Methods – Density Based Methods. Applications and Trends in Data Mining: Data Mining Applications - Trends in data mining.

**Total Hours: 60**

### **COURSE OUTCOMES**

After successful completion of this course, the student will be able to:

- Understanding OLAP technology for data discovery that includes capabilities for limitless report viewing, complex analytical calculations, and predictive (budget, forecast) planning.
- Store voluminous data for online processing.
- Create Data cubes that are used to represent data that is too complex to be described by a table of columns and rows.
- Preprocess the data for mining applications
- Apply the association rules for mining the data
- Analyze various classification techniques
- Cluster the high dimensional data for better organization of the data
- Discover the knowledge imbibed in the high dimensional system.

### **TEXT BOOK**

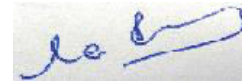
1. Jiawei Han and Micheline Kamber “Data Mining Concepts and Techniques“, 3<sup>rd</sup> Edition, Morgan Kaufmann Publishers 2014.

### **REFERENCE BOOKS**

1. Pieter Adriaans, DolfZantinge, “Data Mining” , Pearson Education,10<sup>th</sup> Edition,2013.
2. Sam Anahory and Dennis Murray, “Data Warehousing in the Real World “, Pearson Education, ,3<sup>rd</sup> Edition,2012.



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**18MCSE02 ELECTIVE-I ENTREPRENEURSHIP DEVELOPMENT**

<b>Semester</b>	<b>II</b>
<b>Credit</b>	<b>4</b>
<b>Paper Types</b>	<b>Elective</b>
<b>Max. Marks</b>	<b>CIA -30 CE -70 TOT -100</b>

**AIM**

To inculcate entrepreneur attitude by providing knowledge of entrepreneurial environment and its benefits. To construct their business plans, building strategies to overcome social issues and guiding how to monitor and evaluate the business.

**COURSE OBJECTIVES**

- Understand the elements of successful entrepreneurship, opportunity identification and assessment.
- Know economic development potential of small business, alternative forms of work arrangements in the new economy balancing an entrepreneurial lifestyle.
- Be a leadership & management skills with best professional ethical practices and social concern.
- Communicate effectively in both verbal and written forms and to be effective entrepreneur.

**PREREQUISITE**

Students should have a basic understanding of how an entrepreneur would deal with a complex project having multiple dimensions and accomplish it without overshooting their resources. Knowledge on basic entrepreneurial skill sets needed for building a business from zero with new ideas to turn those ideas into a profitable business.

**UNIT-I ENTREPRENEURIAL COMPETENCE****12**

Entrepreneurship concept – Entrepreneurship as a Career – Entrepreneur – Personality Characteristics of Successful Entrepreneur – Knowledge and Skills required for an Entrepreneur.

**UNIT-II ENTREPRENEURIAL ENVIRONMENT****12**

Business Environment - Role of Family and Society - Entrepreneurship Development Training and Other Support Organisational Services - Central and State Government Industrial Policies and Regulations - International Business.

**UNIT-III BUSINESS PLAN PREPARATION****12**

Sources of Product for Business - Prefeasibility Study - Criteria for Selection of Product - Ownership - Capital - Budgeting Project Profile Preparation - Matching Entrepreneur with the Project - Feasibility Report Preparation and Evaluation Criteria.

**UNIT-IV LAUNCHING OF SMALL BUSINESS****12**

Finance and Human Resource Mobilization Operations Planning - Market and Channel Selection - Growth Strategies - Product Launching.

**UNIT-V MANAGEMENT OF SMALL BUSINESS****12**

Monitoring and Evaluation of Business - Preventing Sickness and Rehabilitation of Business Units. Effective Management of small Business.

**Total Hours: 60**

## **COURSE OUTCOMES**

After successful completion of this course, the student will be able to:

- Understand and apply the concept of entrepreneurship and its close relationship with enterprise and owner-management.
- Understand how to exhibit innovation and creativity in entrepreneurship and business development
- Ability to organize and utilize the components of the planning process in the development of a new project
- Construct resource mobilization policies and activities involved in securing new and additional resources for organization.
- Better use of and maximizing, existing resources.
- Ability to evaluate the effective management of business units.

## **TEXT BOOK**

1. “Hisrich Michael P Peters, Robert D Hisrich, Entrepreneurship”, Tata McGraw Hill, New Delhi, 6<sup>th</sup> Edition, 2011.

## **REFERENCE BOOKS**

1. P. Saravanavel, ‘\_Entrepreneurial Development’, Ess Pee kay Publishing House, 3<sup>rd</sup> Edition, 2016, Chennai.
2. S.S.Khanka, ‘\_Entrepreneurial Development’, S.Chand and Company Limited, New Delhi, 3<sup>rd</sup> Edition, 2014.
3. Prasama Chandra, Projects – ‘\_Planning, Analysis, Selection, Implementation and Reviews’, Tata McGraw-Hill Publishing Company Limited, 2012.
4. P.C.Jain (ed.), ‘\_Handbook for New Entrepreneurs’, EDII, Oxford University Press, New Delhi, Reprint 2016.



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**18MCSE03 ELECTIVE-I GRID COMPUTING**

<b>Semester</b>	<b>II</b>
<b>Credit</b>	<b>4</b>
<b>Paper Types</b>	<b>Elective</b>
<b>Max. Marks</b>	<b>CIA -30 CE -70 TOT -100</b>

**AIM**

To provide the knowledge of various grid infrastructures, standards and frameworks for commercial organizations and relationship with other architectures and how to merge grid services architecture with other web services architecture.

**COURSE OBJECTIVES**

- Impart the knowledge in Grid computing organization, Anatomy, Road Map, and Grid Services architecture.
- Compare and merge Grid services Architecture with web services Architecture.
- Identify the Grid problem with virtual organizations.
- Understand Web services using XML.

**PREREQUISITE**

Knowledge on various basic data types, data structures, computing techniques, storage management, cloud service models and ability for constructing algorithms using suitable techniques and analyzing the algorithms for various scenarios is needed.

**UNIT – I****12**

Introduction: Early Grid Activity, Current Grid Activity, Overview of Grid Business areas, Grid Applications, Grid Infrastructures.

**UNIT– II****12**

Grid Computing organization and their Roles: Organizations Developing Grid Standards and Best practice Guidelines, Global Grid Forum (GCF), Organization Developing Grid Computing Toolkits and Framework, Organization and building and using grid based solutions to solve computing, commercial organization building and Grid Based solutions.

**UNIT– III****12**

Grid Computing Anatomy: The Grid Problem, The conceptual of virtual organizations, Grid Architecture and relationship to other distributed technology.

**UNIT– IV****12**

The Grid Computing Road Map: Autonomic computing, Business on demand and infrastructure virtualization, Service-Oriented Architecture and Grid, Semantic Grids.

**UNIT– V****12**

Merging the Grid services Architecture with the Web Services Architecture: Service-Oriented Architecture, Web Service Architecture, #XML messages and Enveloping#, Service message description Mechanisms, Relationship between Web Services and Grid Services, Web services Interoperability and the role of the WS-I Organization.

**Total Hours: 60**

### **COURSE OUTCOMES**

After successful completion of this course, the student will be able to:

- Understand the concepts related to Current Grid Activity.
- Select proper technology and tool kit for using Grid computing.
- Differentiate Grid services and Web services.

### **TEXT BOOK**

1. Joshy Joseph and Craig Fellenstein, Grid computing, Pearson / IBM Press, PTR, 2<sup>nd</sup> Edition, 2014.

### **REFERENCE BOOK**

1. Ahmer Abbas and Graig computing, A Practical Guide to technology and applications, Charles River Media, 2<sup>nd</sup> Edition, 2013.



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